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ABSTRACT

This volume is one of a series of NIE sponsored studies, intended to inform the forthcoming congressional debate over the renewal of ESEA Title I. This study reassesses current compensatory education policies as well as alternative Federal strategies. The body of the report has three sections. The first describes the need for and the limits of policy analysis. It concludes with a general rationale for the study's focus; that of basic skills for youth. Section 2 examines various types of evidence bearing on the proposition that adolescents should be included in the compensatory education strategy. Educational statistics, legal analysis, political history, psychological theory, evaluation studies, and field practice are considered in turn. Each section concludes with a set of recommendations regarding the construction of new compensatory education policies to assist adolescents. Section 3 addresses the practical task of devising such policies. It begins by discussing some of the technical and political considerations that bear on all policy choices in education. Four separate proposals are made for new policy; these include two categorical support programs, a program of block grants to states, and a program of applied research and training. The last section provides additional information about the four proposals to assist the policy maker in choosing among them. The cost of each proposal is estimated. In addition, the authors determined the effects of particular allocation formulas that might be used to distribute money under each of the proposals. (Author/AM)

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BETTER BASIC SKILLS FOR YOUTH: FOUR PROPOSALS FOR FEDERAL POLICY

Research Report
EPRC 4427-16

Prepared for:

THE NATIONAL INSTITUTE OF EDUCATION
DEPARTMENT OF HEALTH, EDUCATION,
AND WELFARE
WASHINGTON, D.C. 20208

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EXECUTIVE SUMMARY

The Elementary and Secondary Education Act of 1965 (ESEA) was created to help poor and low-achieving students do better in school and better in life. It was plausibly argued that if federal educational programs concentrated on providing extra help during the early years of schooling, students would not need special attention later on. Although there is no statutory basis for such actions, less formal federal policies for service programs and research alike have favored attention to elementary grade and have tended to disregard the needs of these same students once they pass into the junior-high grades. State policies have been even more lopsided.

Experience now forces us to reassess these policies. No matter how successful early compensatory education programs are, they do not provide a miracle cure for educational disadvantage. The uncomfortable truth is that many adolescents lack basic skills in reading, writing, and calculating--skills that are absolutely essential for the learning tasks of junior and senior high school and for holding a stable and satisfying job. Many of these students are from low-income families; some are not. All are part of a dilemma that now confronts educational policy.

Although largely ignored by policy makers, a number of local projects have survived that assist adolescent students to overcome serious basic skills deficiencies. The records of these compensatory education and basic skills projects in the intermediate and secondary grades are as good as or better than those of projects in the elementary grades, in terms of both short-term and sustained benefits to students. Moreover, such projects provide a foundation of experience upon which a larger national effort could be based.

The reauthorization of ESEA provides an ideal time to reassess compensatory education policies. It is now essential to create a strategy that provides educationally disadvantaged students with effective and appropriate help for as long as it is needed. This can be done in any of several ways. Four possible strategies are described in this report, along with their target groups and the consequences of several allocation formulas. One strategy would make changes in and additions to the existing ESEA legislation. The other three are independent of ESEA.

The first plan would earmark increases in ESEA appropriations to be used in grades 7-12 until such time as a balance were reached between elementary and secondary grades. The principal advantage of this plan is that it would use the existing administrative structure and require only modest changes in the existing law. We estimate that a moderate level of funding for this plan would cost about $643 million annually.

A second plan would create a separate categorical program for youth, and identify its target group through the use of criterion-referenced tests rather than poverty measures. Such a program could be tailored to meet the special circumstances of secondary schools and students without affecting Title I regulations that have proven suitable for elementary projects. We estimate that this plan would cost about $700 million annually at a moderate level of funding.

A third alternative is to use directed bloc grants to assist states in establishing programs for basic skills for youth. This plan could reduce the federal regulatory activity implicit in categorical programs and allow for greater flexibility. It also acknowledges the improvement, over a decade, of the ability of state educational agencies to recognize and meet special needs. Our moderate-level estimate of the cost of this plan is about $540 million annually.

The fourth plan concentrates on providing temporary assistance to those local education agencies that are willing to design and support special efforts to improve youth's basic skills. This program is directed toward the start-up costs of planning, inservice training, and materials acquisition that LEAs are often unable to afford. It also supports the development and dissemination of project designs that differ markedly from current practice. It would not provide for ordinary operating costs. Although designed as a separate program, this plan could also be used in conjunction with any of the others. A moderate-level cost estimate for this plan used separately is about $205 million annually.

By combining data from the Bureau of the Census, the National Assessment of Educational Programs, and the National Center for Health Statistics, we have been able to roughly simulate the distribution of money to districts or states under the four different plans.

The first plan would not affect the proportionate distribution of money to states or districts in any way; within districts, new money would go only to schools including grades 7 or above.

We conclude that using an achievement criterion, as in the second plan, would tend to favor urban and northern school districts more than would a traditional poverty measure. Districts with relatively high proportions of minority students would also benefit, and there would be a slight advantage to districts with low concentrations of poverty families in adopting an achievement-based plan over the more traditional poverty count. These findings generally contradict previous studies. The third plan suggests using a proxy for low achievement, adjusted by region of the country, instead of a direct test of basic skills. Our simulation formula using such a proxy produced state-by-state allocations remarkably similar to those of ESEA in FY1977. However, we conclude that Southern and Midwestern states would benefit rather more, proportionately, than would Northeastern and Western states.

We believe that each of the four plans is technically and financially feasible. Choosing among them, or devising another, is ultimately a political task which the Congress, the administration, and the public must perform. The most important fact to recognize is that in our enthusiasm for assisting disadvantaged students, we have left the job half done. Unless we finish it, we will seriously jeopardize the enormous investments we have already made. This can be prevented if we are willing to change now.

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Finally, we are very grateful to our NIE contract monitor, Charles Troob. His intelligent, detailed interest in the work and the manuscript gave us all a sense of security that is rare in such work, and which has greatly improved the final report.

FOREWORD

This is one of a series of NIE-sponsored studies, intended to inform the forthcoming Congressional debate over the renewal of ESEA Title I. Based upon our previous work, we had come to believe that the current compensatory education strategy did not adequately reflect either the need or the potential for basic skill programs among low-income, low-achieving adolescents. This study provided the opportunity to design and assess alternative federal strategies.

From the outset, we felt that adolescents should be served not by reducing existing programs in the elementary grades but by assigning additional resources to compensatory education in the intermediate and secondary grades. There are two major reasons for adopting this expansion strategy rather than the alternative one of shifting present dollars from one age group to another. First, we cannot make a case that compensatory education in the early grades is either unnecessary or generally unsuccessful. Many elementary grade programs have been successful at producing month-for-month gains during the school year; this portion of the compensatory education strategy should be regarded with careful optimism. Yet projects in the early grades cannot accomplish the task of promoting skills mastery without complementary attention to the students' later school tasks. What we have is not misguided, but it is not enough.

Second, we favor a policy of expansion over one of redistribution because the latter would inevitably spread compensatory education money very thinly across and within school districts. The unavoidable consequence of this would be to reduce the effectiveness and quality of both elementary and secondary projects. There would be little point in attempting to build successful secondary level projects under such conditions.

No program is ever undertaken in isolation. Scarcity of resources often assures that what one program receives another does not. However, with respect to education alone, a high-potential new program appears as likely to draw new federal dollars to education as to divert dollars from existing education programs.

The main body of the report is divided into three sections. In Section 1, we describe the need for--and limits of--policy analysis. Since not everyone agrees on how policy analysis should be conducted, we have tried to at least make our own assumptions and methods clear to the reader. The section concludes with a general rationale for the study's focus, i.e., basic skills for adolescents.

Section 2 is devoted to an examination of various types of evidence bearing on the proposition that adolescents should be included in our compensatory education strategy. Educational statistics, legal analysis, political history, psychological theory, evaluation studies, and field practice are considered in turn. The section concludes with a set of recommendations regarding the construction of new compensatory education policies to assist adolescents.

Section 3 then addresses the practical task of devising such policies. It begins by discussing some of the technical and political considerations that bear on all policy choices in education. Four separate proposals are made for new policy; these include two categorical support programs, a program of bloc grants to states, and a program of applied research and training. We believe that each proposal is financially and politically feasible, and that each would substantially improve our national compensatory education policy.

Section 4 provides additional information about the four proposals that may assist the reader or the policy maker in choosing among them. The cost of each proposal is estimated. In addition, we have attempted to determine the effects of particular allocation formulas that might be used to distribute money under each of the proposals.

As this brief description suggests, the report proceeds from the abstract to the concrete. This is a luxury rarely afforded to policy analysts, who more typically have to begin in the middle of a problem and work in both directions at once. Readers also must sometimes begin in the middle of things, so we have tried to make it possible to read the sections in any order. In particular, those who are especially interested in specific programmatic recommendations may wish to turn directly to Section 3.

Section 1

POLICY ANALYSIS FOR SQUISHY PROBLEMS

I POLICY ANALYSIS: RATIONALISM AND THE EDUCATED GUESS

Research and Policy

Educational policy analyses are often expected to proceed as if decision making can be comfortably and exclusively premised on supportive empirical data. Most attempts to suggest major changes in educational policy are expected to conform to this assumption. If the policy proposal embodies a shift in goals, the new goals are supposed to be set against the old and then proven unambiguously more worthy than the old goals (or, in economic terms, to have a higher relative utility). If a policy proposal advances new means to achieve some previously established goal, then the new means are supposed to represent a precise fit between action and outcome that is demonstrably better than all other means. In either case, the analysis is considered to be vastly improved by--in fact incomplete without--a quantitative methodology that can "prove" the value of the policy proposal according to the self-contained logic of a mathematical analysis. A complete policy analysis of this sort therefore seeks to present the decision maker with a way to select both ends and means on entirely objective grounds, identifying the preferred end and the most likely means.

The desire to reduce real world chaos into such order is readily understandable. The analytic mode described above apparently "proves" the value of a particular policy, analogous to the proofs available in the natural sciences.* It clearly separates the analytic from the intuitive and the scientific from the political. The impression given is that such analyses are "correct" because they contain no reference to the judgment of the analyst, who pointedly leaves it to the decider to sift into the decision a pinch or a pound of political judgment. By establishing a direct causal relationship between the policy and the outcome(s), this type of analysis proceeds as if implementing bureaucracies--the decision maker's bêtes noires--did not exist, thus encouraging the decider to take the same attitude. The considerable appeal of this paradigm comes from the fact that it absolves both analyst and decision maker from responsibility by placing it instead on "the model." This encourages proponents of new educational policy agendas to "prove" that their particular goal or means has been cast in these terms.

---

*Donald Campbell has pointed out that even the most rigorous scientific proofs depend on the acceptance of a large body of common sense knowledge for validation.[1]

Of all the social sciences, economics makes the greatest claims for precision and predictability. If an objective basis for educational policy analysis is to be established, surely we ought to be able to see it in the application of economics to education. That has not happened.

In the 1960s, economists and systems analysts vigorously applied their theories and methods to education. Such general concepts as marginal analysis and rate of return from alternative educational investments were used extensively in the debate over educational policies. But such analysis was stymied by the inability of input-output or production-function analyses to provide the basic information on costs and effects of alternative policies that the rational model demands. Moreover, the variables with which these analyses dealt bore little relationship to the policy tools or resource combinations that were within the control of legislators or school administrators.

Conceivably, this rather large amount of economic research has provided so few clues for policy makers because of data problems: Most school testing that economists adopted as their outcome measure was never intended or designed to reveal value added by marginal resource combinations; input data on the uses of student time are totally inadequate for economic analysis; and there is little good information on capital: labor ratios for specific programs within schools.

But there is an even more fundamental problem than the absence of "good" data. Jesse Burkhead writes that:

> The absence of a realistic optimization assumption indicates a truly fundamental difficulty: very little is known about the decision structures within elementary and secondary education. The "black box" of operations research--the intermediate stage between inputs and outputs--has never been opened. Therefore the economist does not know very much about objective functions that...(we) may seek to maximize.[2]

Disciplines other than economics have been equally persuaded that their empirical findings can ground policy in knowledge. Their at best imperfect successes--sociology's "cycle of poverty" or psychology's "organismic paradigm"--are by now familiar.

The central problem, of course, is that most educational policy analysis deals with "squishy" problems, in which the behavioral and political content is central to the substantive issue. In such cases, an entirely logical or empirical analysis model can be constructed only by doing such violence to common sense that the model becomes a sham. No educational policy proposal can be, or has been, convincingly defined in rationalistic terms alone, because the issues are just too indeterminate, and the values too salient, for confident judgment to be made on empirical grounds alone.

This does not mean, however, that no useful policy analysis can be done, or that no useful advice can be offered. We cannot throw up our hands in despair. As Donald Campbell has put it, "our problem as methodologists is to define our course between the extremes of inert skepticism and naive credulity."[3] This means we must find a way of using both empirical knowledge and intuitive knowledge in ways that are appropriate. If we believe that common sense, political history, and personal values are valid sources of knowledge, if we remember that personal judgment is an intrinsic part of every analysis, and if we accept that analysts must bear a degree of personal responsibility for the conclusions they reach, then we may even arrive at an understanding of problems and their possible solutions.

Policy decisions in education do have to be--and indeed are--made; the upcoming expiration of the Elementary and Secondary Education Act of 1965 insures that educational policy decisions will be made within the next year that extend, replace, modify, or supplement this federal program. This report is an unabashed attempt to influence policy makers as they debate their choices. Before proceeding, we want the reader to understand the principles upon which our policy analysis will be based.

Our first tenet is that empiricism and logic are not, of course, irrelevant to policy analysis. The study collected and evaluated information from the broadest possible range of disciplines and sources; to ignore what is known or presumed would be irresponsible and self-defeating. However, we must remain conscious of the fact that rationalism has its limits. Christopher Jencks has described the dilemmas compellingly in Inequality:

> The statistically minded reader will probably be distressed at our willingness to combine data from disparate sources and at our frequent manipulation [of the data].... We are aware of the hazards involved and have tried to check the validity of our assumptions whenever possible. Nonetheless, the methods we have used may involve considerable error. In self-defense, we can only say that the magnitude of these errors is almost certainly less than if we had simply consulted our prejudices, which seems to be the usual alternative.[4]

Our second tenet is that policy choices are and should be informed by other than scientific arguments. Decisions often turn on the very elements that empiricism seeks to negate: the perceived strength of political wants, the feasibility of implementation, and, most critically, the normative stance with which the decision maker approaches the question. To a large extent, the ends of policy are determined outside the comfortable bounds of quantitative analysis; whether more of the collective resources should be spent on guns than on butter is, in the end, a question of value and political preference, not of proof. Similarly with respect to the fit between means and ends, each set of means to a given end will usually come equipped with some measure of empirical support; none will be clearly best for all situations. Judgments concerning ends, in other words, also will rest on values, while decisions concerning the best means to achieve a given end will be based on hunches. Both should be informed by as much knowledge as is available and by the best thinking that we can muster for the occasion.

Our third tenet is that in a world of indeterminate ends and means, modest adjustments of the status quo are likely to have particular appeal, if only because the consequences of these adjustments can be assessed more readily than can the effects of wholesale revisions. Because the full consequences of most social policies can seldom be known until they have been tried, government is necessarily involved in a process of successive approximation. Such adjustments of policy should not routinely be interpreted as a failure of the previous arrangement of things, nor as a conviction of the perfection of any new arrangements. When there exists no ultimate proof that one set of ends is better than another, we will tend either to look for a balance among goals or to alternate among goals.

The Elementary and Secondary Education Act (ESEA) comes up for renewal in 1977. Decisions concerning its renewal, modification, or replacement will not wait upon the emergence of perfect knowledge or even better data; we must do the best with what is known now, both empirically and intuitively. In this report we call attention to possible changes of strategy in compensatory education that may be appropriately made during the 1977 renewal. These changes involve to some extent both new goals and new means to old goals. We believe that there are sound reasons for making these changes, and we present these reasons in detail. Objections, difficulties, and counterarguments to these changes are also presented. We recognize that some judgments will ultimately be made for reasons apart from any advanced here.

The policy maker's choice among the alternatives presented here should be premised on responses to two questions: Does this, rather than some other set of ends, make particularly good sense now? Do the means we suggest take into account, in intuitively convincing fashion, the factors that seem most relevant? Any approach that promises greater certainty regrettably, if inevitably, distorts decision making.

Choosing Among Goals

Schools have at least five functions, and any proposal for educational policy will affect each differently. This is one reason why all major reforms are controversial. The five are:

- Socialization by bringing children from the family into a minisociety that foreshadows the world of work in the larger society.
- Sorting children for different future roles by differential interests, achievement, and attainment.
- Knowledge and skill training through instruction in the basic skills of reading, writing, and calculating, and the acquisition of certain motor skills and procedures.
- Encouragement of such attributes as creativity, self-reliance, and ability to communicate.
- Custody of the nonworking, young population, including child-sitting, care, and safety responsibilities.

All schools perform each of these functions to some extent. It is not easy and may not even be possible to perform all equally well. For the past century, American public schools have continually shifted the relative importance attached to each function. In cyclical fashion, one goal is stressed as a priority; when its excesses appear to have adversely affected other goals, the first is de-emphasized and another given more attention.

In this cycle of goals, we believe that we have reached the point at which greater attention needs to be given to the most traditional function of the schools: knowledge and skill acquisition. There are a number of compelling reasons for attending to it now in a special way.

First, it is almost self-evident that basic skills are important to us individually and as a society. Between 10 and 12 years of an individual's life are spent in compulsory attendance at school. The abilities to read, write, and calculate would seem minimal prerequisites to a moderately pleasant and productive life during these years. Without basic skills, schooling becomes little short of incarceration. More to the point, however, is that schooling is not an end in itself, but a preparation for dealing with adult society. Even the poorest individuals in an industrialized society must be able to read street signs, figure correct change, and, usually, be able to write their names and addresses. Substantially more--reading and performing written directions, completing application forms, and comparing salary offers--is required for even modest success.

Second, the teaching of basic skills in reading, writing, ciphering and the application of these skills to tasks have historically been the functions most successfully accomplished by the schools. The structure of schools is one in which students usually sit at desks and work alone; it is a structure that stresses individual achievement and competition. This limitation of flexible interpersonal contact and emphasis on competition seems inconsistent with the development of certain interpersonal skills.[5] Similarly, inquiries into the schools' sorting function suggests either that schools have little to do with differentiation after all or that they differentiate, but not in accordance with at least the social goal of equity, or meritocracy.[6] We suggest that federal investments in education are most secure when they concentrate on what we know the schools have done successfully in the past--teaching basic skills.

Third, basic skills require special attention now because in recent years, perhaps the last 20, public attention has stressed other functions of schooling to the detriment of basic skills. Socialization, encouragement, equitable sorting, and custody have all held the spotlight in turn, and have caused broad changes in the structure and composition of schools, as well as in the day-to-day activities of students. In order to maintain any productive balance among the functions of schooling, basic skills acquisition must now be given more attention.

Finally and perhaps most compelling, the public is deeply concerned about the recent performance of the schools in teaching basic skills. Over the last few years, newspapers and magazines have been filled with evidence of that concern. Disputes over the extent and meaning of falling test score patterns persists, but what stands out in the debate is that almost all students are doing less well in reading, writing, and calculating than were students of the same age a decade ago. This is particularly true in the junior high and secondary grades. The empirical meaning of functional literacy is sufficiently vague to make us skeptical of estimates that x million American adults are functionally illiterate. It is, however, clear that low basic skills levels are causing many millions of Americans to have problems in their daily lives, and are to some extent limiting their economic and social participation in society.

Dissatisfaction with the capacity of schools to impart basic academic skills traditionally taught in them appears to be a major reason for the marked erosion in the willingness of citizens to float bond issues in support of the schools. Such broad public concern does not readily suggest a means of solving problems, but the nature of the concern can only be dismissed at considerable risk to the legitimacy of educational institutions.

Choosing the Means to an End

For the reasons discussed above, we chose the improvement of basic skills, particularly for adolescents, as the goal that our subsequent policy analyses would address. The choice was made on both rational and value grounds, and we will assume, at least temporarily, that the reader is in accord with us so far. The question of means remains.

The goal of basic skills attainment can be pursued directly through categorical programs aimed at students with poor skills, through separate classes in basic skills instruction, through instruction in basic skills and their application in the context of regular classes and activities, or basic skills may be pursued indirectly. Indirect approaches could proceed through categorical programs aimed at affective, career, or vocational education (on the theory that such activities create the motivation to acquire or use basic skills), through social programs that provide food, clothing, and health care (on the theory that only after survival needs have been met can a student turn to higher order tasks), or by changing the governance structure of the school to give parents and students more power over budgets and curriculum (on the theory that this would reduce alienation from and resistance to school tasks that are now seen as imposed from outside). Some ends can, of course, be obtained indirectly. For example, happiness may best be attained by treating others fairly and doing one's work well, rather than by searching for it directly.

Our concern here lies with the role of the federal government in encouraging emphasis on basic skills acquisition. Thus the critical question is whether federal efforts to support basic skills should be in the form of direct programs, or should anticipate the acquisition of basic skills as the secondary or even tertiary effects of programs with other primary goals.

The direct approach seems most feasible to us. In defense of this position, we argue that the federal government has a differential interest in and responsibility toward supporting the various functions of schools and should use marginal federal dollars to support not everything but only those functions that are considered most essential. We doubt, moreover that there is any reason to believe that programs with other ends will result even indirectly in improved basic skills. Although students who think positively, eat well, and are informed as to the world of work may be more likely to take advantage of basic skills training, none of these activities leads to reading, counting, or thinking in the absence of direct instruction in the latter subjects.

Furthermore, the structure of federal programs is such that they do not serve indirect goals very well. Federal educational programs are typically categorical, that is, they are aimed at a specific target group, and monies are to be spent on precisely those students. For example, bilingual program monies are to be spent on children whose primary language skills are in a language other than English. Career education monies are to be spent on those students who require assistance in learning about, choosing, and preparing for careers. The overlap between these target groups and the subpopulation of students who need additional assistance in learning basic skills is only partial. In the first example, a program for bilingual children would serve far fewer than the group in need. In the second, a career education program would serve far more. In neither case would we expect even moderately accurate coverage of the target group at stake (low achievers), nor could we expect very great efficiency in the use of the monies put forward.

Perhaps most to the point, the professionals involved in other federal education programs do not see them as means to other ends (i.e., basic skills), but as important in and of themselves. They are therefore not very interested in designing local projects that attempt to accomplish multiple ends.

Overall, a federal strategy of promoting basic skills through indirect program means appears both more risky and more costly than doing so directly. The federal government now stands deeply committed to a program that pursues basic skills directly. Although compensatory education, as embodied in Title I, has a history of multiple and shifting objectives, throughout the decade of its operation and at all levels--federal, state, and local--it has evinced a clear and consistent focus on basic skills. Federal compensatory education policy in 1976 is categorical, incremental, and designed to help low-achieving students acquire, improve, and apply skills in reading and math.

Endorsing direct federal support implies only our preference for making improved basic skills a program goal. It is not a preference for local project designs that isolate either Title I students or basic skills subject matter.* For a variety of reasons, which we discuss later, some districts have chosen compensatory education project designs that teach only reading or math skills to only Title I identified students. Other project designs, including highly innovative uses of mixed class assignments, team teaching, and the integration of basic skills instruction with regular English, social studies, or science course work, have also been adopted. We wish to preserve the possibility of using such approaches in our choice of direct means.

This chapter has described and argued for both a particular set of ends and a set of means for federal compensatory education policy, namely some direct support of programs intended to help adolescents acquire basic skills. We have been particularly concerned with presenting these choices in the context of what we believe policy analysis can promise in education, and how we believe policy analysis must proceed. This represents, in effect, the theoretical foundation of our work.

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*The word "program" is used throughout this report to refer to a governmental system of funding or regulation (as in "ESEA Title I is a federal compensatory education program") or to refer to an administrative level through which money and regulations flow but only limited discretion is permitted (as in "The Iowa Title I program was very successful"). By contrast, the word "project" refers to the working sites at the local district or school levels, where decisions about curriculum, participation, staffing, and so on are made (as in "the project at Lincoln High costs about $250 per pupil"). This distinction is made in the ESEA legislation and has been suggested as well by such evaluators as Joseph Wholey.[7] Popular usage tends to mix the words "program" and "project", resulting in serious confusion.

The next several chapters, however, have a very different purpose: to convince the skeptical reader through practical argument that federal education policy to promote basic skills among adolescents is feasible, necessary, timely, and stands a reasonable chance of achieving its goals.

Section 2

THE CASE FOR SERVING ADOLESCENTS

II THE NEED FOR IMPROVING BASIC SKILLS AMONG ADOLESCENTS

Many students in the intermediate grades need assistance if they are to have even modestly productive secondary school careers and adult lives. Whether we label that help compensatory education, remedial education, basic skills acquisition, or something else is unimportant. The unavoidable facts are that many adolescents lack adequate skills in reading, calculating, writing, and analyzing, and that the situation has gotten worse over time. Inadequate basic skills are neither defined by nor limited to the phenomenon that has come to be called the "test score decline," but that phrase provides us with a convenient starting point for our discussion.

Declining Test Scores

Researchers have repeatedly reported the unsettling news that, while achievement scores are increasing in the primary grades, the achievement of the nation's intermediate and secondary school children has been declining steadily over at least the last decade. Evidence of this is drawn from a wide variety of sources, including college entrance examinations, state yearly achievement-testing programs, and national evaluations.

Scores on both the verbal and mathematics portions of the Scholastic Aptitude Test (SAT) have fallen consistently for the last 12 years. Similarly, scores on the American College Tests (ACT), another college entrance examination, have been dropping in English, mathematics, and social science for the last 10 years. These patterns tell us about the skills of college-bound students, supposedly the top stratum of secondary students.

Similar findings are reported for students generally. Scores for high school juniors on the Minnesota Scholastic Aptitude Test have declined significantly over a period of several years. Scores have declined on the Iowa Tests of Educational Development (ITED) in all subject areas for grades 9 through 12 in Iowa, while the companion Iowa Tests of Basic Skills (ITBS) national norming data show similar drops in language, mathematics, and reading skills for grades 5 through 8. The Comprehensive Tests of Basic Skills (CTBS) national norming data indicate a drop in mathematics and reading skills in grades 5 through 10, along with a drop in language skills in grades 6 through 10. The National Assessment of Educational Progress (NAEP) shows a decline over a five-year period in the ability of students in all three age groups (9-, 13-, and 17-year-olds) to produce written compositions. NAEP also reports across-the-board declines in science knowledge.

States using one or more instruments in a systematic program of yearly testing report statewide declines in the intermediate and upper grades. California, Hawaii, Idaho, Iowa, New York, South Dakota, and Maryland have all acknowledged this pattern.

Evidence of widespread decline in the skills of superior and average students is upsetting, but it would not concern compensatory education policy if the skills of the poorest students were improving--either absolutely or relative to the skills of other students. There is little evidence to support this optimism, however. It is true that the skills of primary grade students (the beneficiaries of most Title I projects) are improving somewhat. But these gains seem to be only temporary and apparently do not have good effects that last very long after special compensatory projects are stopped.

Perhaps the clearest evidence for this is to be found in analyses of statewide testing programs.

Thomas and Pelavin report:

> In the most obvious manner, the California data show that the high level of Title I project gains [made in the primary grades] ... is not being sustained by Title I eligible students as they progress through the upper grades.[1]

Thomas and Pelavin found similar results when analyzing Michigan data, and after studying New York data they concluded that "there has been a decline in reading performance for the entire population since 1966 and that this decline is slightly worse for the poorest readers."[2]

NAEP reports of written composition reach similar conclusions. For 17-year-olds, NAEP reported that, in addition to overall declines,

> Poor writers are getting worse... They are writing shorter, less stylistically sophisticated essays but retaining about the same [high] error rates--in effect, increasing their proportion of errors...Poor writers are getting poorer, then, in those skills that are...acquired largely through broad reading and considerable rewriting [these] are most seldom taught and, when taught, are most difficult to teach, especially to poor readers and people who have little use for printed communication. Similarly, thirteen year olds were writing more awkward, run-on sentences, using simpler vocabulary and worse spelling and punctuation.[3]

By contrast to these disappointing declines in the skills of older students, there does not seem to be a decline in the skills of elementary grade students. Metropolitan Readiness Test scores have risen for first graders. ITBS scores in Iowa have risen in all areas for third graders. The writing skills of 9-year-olds have improved, according to the NAEP. And the California Testing Bureau reports that national norming data show a rise in grades 2, 3, and 4. These and other studies indicate that even when compensatory education programs can demonstrate unambiguously positive gains during the primary grades, the gap between the achievement of advantaged and disadvantaged children is re-created after special efforts are cut off.*

The emerging pattern is now fairly clear: basic skills have improved for the average student in grades 1, 2, 3, and perhaps 4.† Achievement in basic skills is declining in all subsequent grades. Our national strategy of intervention in the early grades has not provided a miracle cure for educational disadvantage among the children of the poor. Educators and policy makers alike must now face the realization that even disadvantaged children in successful elementary projects are not being inoculated against later school problems.

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*Here again evidence is scanty, but what there is suggests that gains from compensatory education at every grade level are fragile, in that a portion of the gain is dissipated over the succeeding summer. The implication is that assistance needs to be given over extended periods of time.

†There is evidence to suggest that test scores may also be improving somewhat for the lowest achieving group of primary grade students as well, but this is less clear.

The evidence appears to be too substantial and too consistent to be discounted. Whatever else declining test scores may mean, and whatever may be their causes, they tell us that intermediate and secondary students know less than we had hoped about subjects and skills that we had assumed they were learning in school. The shock is greater because the findings contradict some dearly held beliefs. Assistance to and concentration on basic skills in the early grades is not a miracle drug for the ills of the educationally disadvantaged who are doing poorly. Inadequacy of basic skills and consequent poor achievement does not respect income lines. Increasing numbers of students from middle- and upper-income families are not able to meet traditional expectations of school achievement.

Possible Causes for the Decline

Three general explanations for these disquieting findings have been offered. The first is that declines are due to changes in the composition of the tests or of the population of students that takes the tests. However, existing analyses of both tests and student characteristics suggest that these factors have very little explanatory power.[4] In fact, changes in the tests might be expected to raise rather than lower average scores. Similarly, changes in the student population might account for declines in the scores of late high school grades and for the lower average college entrance score, but cannot explain either declines in the late elementary and junior high grades or the decrease in the number of students scoring in the highest categories of college entrance exams.

A second type of explanation focuses on social and cultural changes in the context of schooling. In their most histrionic form, these explanations blame every contemporary phenomenon from the civil rights movement to women's liberation.[5] More reasonably, we know that Americans use basic skills less than they have in previous eras. Reading for pleasure has been somewhat replaced by television watching, no one writes a letter if a telephone call will suffice, and we often do even simple sums with a pocket calculator. Children of all social groups observe fewer examples of the utility or the pleasure of these basic skills in everyday life. Such factors undoubtedly have some bearing on the condition of basic skills in our society, but it is not at all clear whether public policy can or even should do anything to change these conditions.

But basic skills are also a concern of the schools and a result of what schooling is like. A third explanation for declining basic skills concentrates on what is going on inside, not outside, the intermediate and secondary school. Basic skills, at least in the form of classes on how to read, write, and do simple sums, are not ordinarily part of the school curriculum beyond the elementary grades, even though research indicates that most children continue to develop these skills through adolescence. Traditionally, these are subjects that are thought to belong in the elementary schools. Senior high schools have long assumed that entering students knew as much about basic skills as they needed or wanted to, and they directed the curriculum toward the acquisition of higher content (the social and physical sciences) and toward the development of practical skills (vocational and home economics courses). The junior high school movement of the 1950s extended this pattern into the intermediate grades, and although the earliest junior high school curricula often included a required core of reading, writing, and arithmetic, these classes have gradually become electives and have often been dropped from the schedule completely.

Certification requirements for intermediate and secondary teachers reflect this concept of the function of secondary schools in that they stress concentrated study of the subject area that will later be taught, rather than either general pedagogy or specific knowledge of how to teach basic skills. Thus, teachers feel unprepared to cope with students who arrive in their classes unable to read the standard textbooks. Those secondary teachers concerned enough to try to improve their own ability to teach basic skills are unlikely to find much help at the local university, which usually offers reading pedagogy only for teachers of elementary grades.

All this has been true, however, for about the last 25 years. It does not provide an entirely adequate explanation for the declines of the last decade. More to the point are studies showing that over the last decade schools have offered fewer courses (and students have less frequently enrolled) in the academic subjects that require the use of basic skills. Over just a two-year period, enrollment of students has dropped sharply in both junior and senior high school general English courses, high school foreign languages, general mathematics, and general science (about 15% in each subject). There has been a simultaneous decrease of enrollment in practical courses, such as vocational, business, and economics subjects (about 30%). Apparently students simply are not taking courses that would require or sharpen basic skills by applying them to either intellectual or practical tasks.[6]

Since the early 1960s, school systems have accepted more and more of the burden of social reform, and this has had a substantial impact on the curriculum. To some extent this reformist role was thrust upon the schools. All levels of government--local, state, and federal alike--made requests of the intermediate and secondary schools, which adapted their curricula to the tasks of career education, ethnic history and culture, desegregation, sex and family education, and a myriad of other functions. Previously these tasks either went undone or were assumed by such agencies as the family, the church, or the local community. As these agencies lost their authority, or became unwilling to assume responsibility for the tasks of a more pluralistic society, the job of the schools became increasingly complicated. Inevitably, new subjects and goals crowded the traditional curriculum: Drug education, sex education, environmental preservation, and ethnic history all make a legitimate claim on a school's time. Basic skills and new tasks competed for limited school hours. In a situation in which federal and state agencies offered substantial financial incentives for introducing programs of curricular innovation, and no one offered support for basic skills, the choice of the prudent school board was simple.

The competition between basic skills and other subjects may extend to a competition among social paradigms. There is an intrinsic tension between the principles of basic skills and the values of pluralistic societies. As Wiley and Harnischfeger point out:

> The whole notion of "basic" skills, or more generally, "basic" education is fundamentally homogenizing. It implies that there is an underlying foundation of skills or learnings which precurse subsequent, more diverse, learnings. Whether these are conceived as psychologically prerequisite or socially mandatory is irrelevant to their homogenizing character....Consequently, the greater emphasis on (the more instructional time devoted to) such basics, the more similar are the educative experiences of individuals.[7]

Does this mean that in order to reemphasize basic skills we must inevitably retreat from other social goals? Some educators and parents seem to believe that a pedagogy that stresses skills in reading, writing, and calculation must be imbedded in a restrictive set of moral, political, or cultural standards: the burgeoning three-Rs schools and the "back to basics" movement strongly hints of this. To those who value a pluralistic society, this is both undesirable and unlikely to permanently solve the important educational problems we face.

If the skills we have in mind actually are basic--if they contribute to understanding and mastery of other values, tasks, and subjects--presumably there are ways to teach them without sacrificing other valid educational concerns. For example, great changes have taken place in the primary grades over the last decade. Much more effort and emphasis have been placed on teaching the most rudimentary skills, and this may account for the increased measures of basic skills achievement in these grades. Yet far from becoming rigid and homogeneous, elementary schools have taken the lead in exploring new pedagogies and innovative organizations. It is predominantly in the primary grades that we find basic skills instruction linked to such movements as bilingual and bicultural education, individualized instruction, and flexible curricula and settings.

One indicator of adolescent achievement that has not fallen is the NAEP assessment of functional literacy for 17-year-olds. Like the achievement tests of the primary grades, this is a test of the very simplest of skills--decoding simple vocabulary and literal comprehension. Improvement of the most disadvantaged groups on these instruments suggests that, as in the primary grades, we have begun to understand how to impart these preliminary skills, even in a pluralistic milieu.[8]

What are not rising (in fact, are falling) are measures of the more sophisticated basic skills: advanced vocabulary, the ability to recognize multiple expressions of the same concept, inferential comprehension, almost all forms of written language, and the application of reading, writing, calculating, and thinking skills to more complicated textual materials and more complicated ideas. By their very nature, these are the skills that are used to clarify, debate, and test competing ideas, as in philosophy, science, and literature. They are skills that depend on the expansion, not the contraction, of intellectual and personal experience, an expansion that is intimately linked to the development of students during the adolescent years.

Responses to the Decline

We will return to this theme throughout this report, because it has implications for many important aspects of our work. It influences the choices made concerning target groups, the form and usefulness of testing, the kinds of local project designs that a national program will foster, and the definition of both short-term and long-term goals. In general, it links the question of what needs to be done with the question of how to accomplish it.

Despite the concern of both the public and of professional educators, the problem remains. Student achievement is falling; by implication, intermediate and secondary schools are in some disarray. Early reactions have taken rather predictable forms. The first has been an attempt to "kill the messenger" by abandoning all standardized testing. If test scores are falling, the logic runs, it must be the fault of the test, either because tests are poorly constructed or because in some way they encourage students not to learn. This response is both contradicted by research and guaranteed only to hide real problems.

Another familiar reaction is to blame the victim. Adolescents are upbraided for being poorly motivated, rebellious about the values of society, and interested only in peer approval, for which reasons, they do poorly in school. What they need, we are told, is law and order, not coddling. These assertions are also contradicted by the research evidence, and are equally unlikely to improve anyone's performance or attitude.

A third conventional response is school budget cutting by disenchanted taxpayers. If citizens are unhappy with the schools, we are told, they should show their dissatisfaction through their budgetary control: disapprove the bond issue, don't pass the school tax, cut the staff, enforce accountability, and search out and fire the offending teachers and administrators. These efforts may shake up school systems,but are unlikely to produce long-term solutions to the basic skills problem.

Not all reactions have been such obvious dead ends. There exist many well-intentioned and moderately productive actions. The first may be summarized in the phrase "absolve the victim." In our society, two large classes of people are routinely not held responsible for their actions: children and the sick. It is a relief to everyone concerned when an embarrassing situation can be redefined by identifying the problem population with one of these elements. Much of what we call "special education," particularly the area of "learning disabilities," may be nothing more than compensatory education for the middle- and upper-income family, clothed in the respectable garb of a nontraceable, minimal brain dysfunction. It is hard to distinguish between learning disabilities and compensatory education programs, either according to the observable characteristics of the student population or the corrective treatments they receive.

Some may question the need for two categories with such great potential overlap. However, to the extent that removing the onus of responsibility from the student enables educators to get on with the business of providing help and legislators to get on with the business of paying for it, this may be a productive development. Inherent in this solution, however, is the assumption that the basic skills problems are confined to an abnormal subgroup of the total school population, and that systematic changes are therefore not required. To this extent it delays and distorts the process of getting help.

Another moderately productive response is to initiate new standards in the school system. Several states have expressed their concern by setting new requirements for intermediate and secondary teacher certification. These new requirements include some course work and experience in the instruction of reading and other basic skills. Currently, 13 states have or are considering such a requirement. Other states and communities have taken a different course, passing laws or changing rules to abolish what is known as "social promotion." In New York City, Las Vegas, California, Florida, and Maryland, students who are significantly behind their grade level in reading or other basic skills may have to repeat a grade rather than be passed on to the next with their classmates.[9] Some researchers question the efficacy of this procedure for the student,[10] but most agree that it at least prevents a student from reaching or even leaving high school relatively unaware that he or she is not doing adequate work. Yet this method of reform provides neither guidance nor resources to the school or teacher for improving the student's skills.

A third increasingly popular reform involves the establishment of competency requirements for high school graduation or the granting of a diploma. Arizona, Oregon, California, Florida, Kansas, Tennessee, and districts in Colorado and Alaska have established policies of requiring high school students to demonstrate minimum proficiencies in reading (usually eighth grade level skills) as a prerequisite to graduation. Similar measures are under consideration in other states. In two states, California and Florida, graduation from high school and exemption from compulsory schooling may be obtained by students who pass a special competency exam.[11]

All of the efforts discussed above share an assumption that changing the output requirements of teachers, students, or schools will eventually cause changes in school organization, budgets, and teaching priorities that will improve student skills. This assumption is probably valid, as far as it goes. If the outcome standards embody a value consensus and if enforcement is stable, it is certainly in the best interest of students, teachers, school boards, and parents to do whatever is possible to meet the standards, including making organizational and curricular changes. However, these are only partial solutions, insofar as they imply that the outputs of education can be drastically altered without simultaneously changing the resources of the schools or the procedural rules by which they are run. State and federal governments are largely responsible for the rules by which districts operate, at least partially responsible for the present disarray of the curriculum, and in various degrees responsible for financing both general education and special programs. At present, schools and school districts are exhorted to change, but are provided with no additional resources for the creative, administrative, or financial burdens of change. This is both unproductive and unfair.

Massive new funding for education is not necessarily needed. States and school districts have been willing, even eager, accomplices in the disarrangement of their curricula and budgets. In some places the number of state categorical programs and special mandates easily meets or exceeds that of the federal programs. If curricular order is to be restored, school districts and states will need to put their own houses in order as part of that process. This means reallocating existing resources and making painful decisions concerning what subjects are most essential.

But there is also a need for additional outside assistance, both in the form of leadership and in the form of well-placed money. The reorganizations of personnel, curricula, and pedagogy that are called for do not occur overnight, nor are they free. The federal government has thus far not contributed to ameliorating these problems. In fact, as the next chapter argues, federal education policies, by ignoring the needs of intermediate and secondary school students, have made the situation worse.

III THE PATTERN OF FEDERAL POLICIES

Despite the manifest need for attention to adolescent basic skills, for the past several years Title I participants have been drawn primarily from the elementary grades. Dollar allotments have also been concentrated in the elementary grades. Neither concentration reflects the distribution of students eligible to receive Title I services. Data from the Interagency Panel Information System demonstrate a similar disparity between the number of federal research projects and funding levels devoted to early childhood versus adolescence.

Title I Participation and Allotments

Title I participation and allotments have been concentrated in the elementary grades throughout all regions of the country. As Table 1 shows, for the nation in 1973-74 there were 3.7 Title I participants in grades 1 through 6 for each Title I participant in grades 7 through 12; the same 3.7-to-1 ratio existed for the dollar allotments between the two grade spans. These ratios did vary by region. Concentration of allotments and participation in grades 1 through 6 was highest in the North Central region, where the elementary-to-secondary ratio was 4.4 to 1, and lowest in the Northeast where the ratio was 2.5 to 1.

Another way to look at the distribution of participation and allotments is by percentages. For the nation in 1973-74, approximately 71% of the total participants and allotments were in grades 1 through 6, 19% were in grades 7 through 12, and the remaining 10% were in prekindergarten, kindergarten, and ungraded classes.

While the concentration of Title I participants in the elementary grades is associated with the distribution of dollar allotments, the concentration is not correlated with the distribution of potential Title I students. There are several ways to define the Title I population. The legislation provides that money will be distributed to districts according

Table 1

TITLE I ALLOTMENTS AND STUDENT PARTICIPATION FOR GRADE SPANS 1-6 AND 7-12, BY REGION, 1973-74

	Total*	Grades 1-6	Grades 7-12
Nation†			
Dollars	1,654,333,024	1,172,922,114	319,286,274
Participants	4,457,045	3,158,478	861,599
Ratio		3.7 to 1	
Percent		70.8	19.3
Northeast			
Dollars	461,888,089	303,460,474	123,786,008
Participants	1,013,678	666,432	271,855
Ratio		2.5 to 1	
Percent		65.7	26.8
North Central			
Dollars	364,882,880	262,714,638	59,475,901
Participants	838,055	603,023	136,751
Ratio		4.4 to 1	
Percent		71.9	16.3
South			
Dollars	590,225,558	436,176,687	103,879,698
Participants	1,743,790	1,288,680	305,950
Ratio		4.2 to 1	
Percent		73.9	17.5
West			
Dollars	237,336,547	165,423,573	40,584,550
Participants	861,522	600,337	147,043
Ratio		4.1 to 1	
Percent		69.6	17.0

*Total includes prekindergarten, kindergarten, and Title I allotments, as well as participants in ungraded classes.

†Includes 50 states for allotments and 47 states for participants.

Source: Allotment data from DHEW, Office of Education, National Center for Education Statistics.
Participation data from FY1974 Title I Annual Evaluation Reports published by individual states.

to a count of all the children aged 5-17 from poverty families residing in each district. These are commonly referred to as "formula eligible" students. However, although districts count older students (12-17) for the purposes of getting the money, they rarely spend any money on these students. One way of expressing this is by comparing the number of participants to the number of eligible students in a grade. Table 2 displays this comparison in percentages for the elementary and secondary grades.

Table 2

TITLE I PARTICIPANTS AS A PERCENTAGE OF TITLE I ELIGIBILITY COUNTS FOR GRADE SPANS 1-6 AND 7-12 BY REGION: 1973-74*

	Grades 1-6	Grades 7-12
47 States	103.7%	34.3%
Northeast	74.5	39.5
North Central	80.4	22.6
South	157.8	40.7
West	102.8	31.7

*Statistics on participants aged 1 to 6 and 7 to 12 obtained from FY1974 Title I Annual Evaluation Reports published by the individual states. Statistics on eligibles obtained from 1970 census and DHEW, Office of Education.

It shows, for example, that in the South, approximately 158 students participate in elementary grade Title I programs for every 100 formula eligible students in that age group. At the same time only about 41 secondary students were served by Title I for every 100 formula eligible secondary students that had been counted for distributing money. The reader should note that because different criteria are used for determining the Title I eligibility of local educational agencies and children's eligibility for participation, these data do not mean that 103% of the nation's Title I eligible students in grades 1-6 actually received Title I services. A significant number of low achievers and low-income students do not participate in Title I because the school they attend does not meet the family income criterion for receiving Title I funds.

The uneven distribution of Title I participants between the elementary and secondary levels has existed for several years. Table 3 describes Title I participation for grade spans K-3 and 7-9 as a percentage of total Title I participation for the years 1969-73.

Table 3 suggests that Title I participation was not allocated equally among elementary and intermediate levels in any of the states. Indeed, the disparity in participation rates has increased over time: for the nation, the percentage of intermediate level participants actually decreased over the five-year period between 1969 and 1973. Intermediate students, who accounted for approximately 20% of the total participants in 1969, constituted only some 16% of the total in 1973.

What makes this pattern more bizarre is the fact that as the national birthrate has fallen over the last few years, enrollments in the elementary grades have dropped very sharply. Enrollments in the secondary grades have not yet been affected. Thus the imbalance of participation and funds in the primary grades is even greater than these tables suggest, since there are fewer elementary students altogether.

Federal Research

The unequal distribution of Title I participants and allotments to elementary and secondary grades is paralleled by a similar disparity between the number of federal research projects and respective funding levels devoted to early childhood and adolescence. The Interagency Panel Information System provided the data in Table 4 on FY 1975 federally sponsored research projects. The projects were categorized as "early childhood only," "adolescence only," or "overlapping," a category that includes those projects dealing with both early childhood and adolescence and projects of general applicability.

Table 3

TITLE I PARTICIPATION IN GRADE SPANS K-3 AND 7-9 AS A PERCENTAGE OF TOTAL PARTICIPATION, BY STATE, 1969-73

	1969		1970		1971		1972		1973	
State	K-3	7-9	K-3	7-9	K-3	7-9	K-3	7-9	K-3	7-9
Total from states shown below	36.2%	21.7%	39.7%	18.4%	40.5%	16.0%	40.9%	16.4%	44.2%	15.9%
Arizona	NR	NR	NR	NR	38.0	25.0	40.0	23.0	48.0	21.0
Arkansas	NR	NR	NR	NR	30.2	23.8	NR	NR	28.9	24.8
California	41.8	20.8	50.4	8.9	52.1	9.1	51.9	8.2	54.0	6.6
Colorado	33.9	25.1	NR	NR	37.9	20.3	38.4	23.2	42.3	19.3
Connecticut	NR	NR	NR	NR	56.0	10.0	55.0	12.0	56.0	11.0
Florida	32.8	25.3	35.9	27.0	38.2	17.5	46.3	17.5	47.9	16.5
Georgia	NR	NR	NR	NR	NR	NR	36.1	23.3	37.2	23.7
Hawaii	30.5	24.6	NR	NR	42.4	17.0	33.5	21.7	NR	NR
Idaho	33.1	21.2	25.6	26.5	27.3	24.1	34.6	17.5	41.8	16.3
Kansas	30.5	22.2	37.8	19.5	38.9	21.1	38.4	18.1	45.3	18.4
Louisiana	29.0	24.2	32.5	21.5	35.2	20.6	31.1	20.8	30.1	21.2
Massachusetts	42.6	18.3	54.6	5.7	55.2	6.6	59.2	4.4	60.4	4.0
Missouri	NR	NR	32.4	22.4	34.1	20.2	35.2	19.3	37.8	17.2
Montana	36.7	19.7	26.9	23.3	34.7	22.5	29.3	24.9	31.0	25.7
Ohio	45.7	17.2	49.3	16.2	54.0	11.0	57.0	9.0	59.9	5.7
Pennsylvania	NR	NR	NR	NR	36.2	19.8	35.5	24.0	35.8	23.8
Rhode Island	49.2	11.2	51.6	11.7	55.7	11.9	51.2	15.9	47.8	16.0
South Carolina	NR	NR	31.1	23.0	31.5	22.6	33.4	21.5	32.4	21.5
South Dakota	39.4	19.9	41.9	19.6	38.7	18.2	44.0	16.9	44.9	15.5
Texas	NR	NR	NR	NR	37.6	22.0	42.6	18.8	44.2	16.4
Virginia	NR	NR	38.8	19.5	48.8	12.9	50.8	17.0	54.0	11.6
Wisconsin	39.6	18.7	49.7	12.8	53.1	7.7	57.7	6.3	62.3	5.4
Wyoming	36.8	20.1	33.2	21.9	37.2	18.3	38.4	18.2	41.9	16.5

Notes: NR = Not Reported

Number of states = 14 in 1969, 15 in 1970; 22 in 1971, 1972, and 1973

Source: Title I Annual Evaluation Reports published by individual states

Table 4

SELECTED PROJECTS* IN THE INTERAGENCY PANEL INFORMATION SYSTEM, BY AGE LEVEL INVOLVED, FY1975

	Projects		Funding	
	Number	Percent of Total	Dollar Amount	Percent of Total
Total	1938	100%	$256,737,855	100%
Early childhood only†	590	30.4	84,800,832	33.0
Adolescence only‡	414	21.3	30,403,455	11.8
Overlap§	934	48.1	141,198,474	54.9

*Agencies include Office of Education, National Institute of Education, and Assistant Secretary of Planning and Evaluation.

†Includes projects involving early childhood only.

‡Includes project involving adolescence only.

§Includes projects that involve both early childhood and adolescence or are of a general nature.

Source: Interagency Panel Information System, FY1975 data collection, special tabulations

More early childhood projects than adolescent projects were sponsored by OE, NIE, and ASPE. (30.4% of the total projects, compared to 21.3%). Of greater moment, the difference between early childhood and adolescence increases when funding levels are considered: 33% of the total funds were devoted to early childhood while 11.8% were devoted to adolescence. The ratio of the number of early childhood projects to the number of adolescence projects was 1.4 to 1; the funding ratio was 2.8 to 1.

As Table 5 shows, this uneven distribution of the federal research dollar also existed in FY1973 and FY1974. Although the ratio of early childhood projects to adolescence projects decreased slightly between

Table 5

SELECTED AGENCIES* IN THE INTERAGENCY PANEL INFORMATION SYSTEM, BY AGE LEVEL INVOLVED, FY1973 to FY1975

	FY1973	FY1974	FY1975
	Number of Projects		
Early Childhood only	36.0%	31.4%	30.4%
Adolescence only	18.5	23.7	21.3
Overlap	45.3	44.7	48.1
Total†	100	100	100
Total number of projects	1,038	1,643	1,938
	Funding Levels		
Early childhood only	21.8%	39.4%	33.0%
Adolescence only	14.4	15.8	11.8
Overlap	63.7	44.7	54.9
Total†	100	100	100
Total Dollars	$210,375,489	$210,221,195	$256,737,855

*Agencies include Office of Education, National Institute of Education, and Assistant Secretary of Planning and Evaluation.

†Percentages may not total 100% due to rounding.

Source: Interagency Panel Information System, FY1973, FY1974, and FY1975 data collection, special tabulations

FY1973 and FY1975 (1.9 to 1 in FY1973, 1.4 to 1 in FY1975), the difference between funding levels actually increased during these years. In FY1973, $1.50 was spent on early childhood projects for each $1.00 spent on adolescent research. The ratio had increased to $2.80 to $1.00 by FY1975.

In brief, for the nation in 1973-74, there were 3.7 Title I participants in grades 7-12. The uneven distribution of Title I participants between these grade spans was true for each region of the country. Title I dollar allotments were also concentrated in grades 1-6 during 1973-74 throughout the nation. These concentrations in the elementary grades did not reflect the distribution of students eligible to receive Title I services. The uneven distribution of Title I participants was not limited to 1973-74. For the period 1969-73, the number of Title I participants in grades 7-9 as a percentage of total participation actually decreased from approximately 20% in 1969 to 16% in 1973. Participation in grades K-3 increased from 37.3% to 44.7% during these years. From FY1973 to FY1975, there were also significantly more federal research projects and higher funding levels for early childhood than adolescence. The sources of this preference for early childhood programs and research projects is the subject of the next chapter.

IV WHY TITLE I ESEA HAS BEEN FOCUSED ON THE ELEMENTARY GRADES

As the previous chapter has documented, Title I has consistently favored the elementary grades at the expense of intermediate and secondary students. Four factors contributed to the early grade orientation of Title I: the political and research climate at the time of implementation of the legislation and through its amendments; the legislation and legislative intent; federal administrative influence, especially through regulations and guidelines; and state and local policies. Each is assessed in this chapter.

Political and Research Climate

The Elementary and Secondary Education Act of 1965 (ESEA) emerged as an important part of Lyndon Johnson's War on Poverty. Antipoverty programs did not directly redistribute wealth. Instead, they were premised on a theory that breaking the "cycle of poverty" through the application of strategically targeted federal funds would lead to the elimination of poverty.

Education was seen as a crucial element of the overall strategy. President Johnson observed: "Poverty will no longer be a bar to learning and learning shall offer an escape from poverty ... this truly is the key which can unlock the door to a great society.[1] A National Education Association spokesman said of ESEA: "The relationship of poverty and ignorance, long acknowledged, is being applied for the first time in Title I of the bill."[2]

The enormous political energy that produced ESEA arose in part from a very practical worry about the alienation and increasing restiveness of the nation's poverty population. It also arose from the wedding of politics and research. The social sciences were thought to hold the key to political action of unprecedented effectiveness: they could not only define the problem, but also offer a solution. The problem, Congress was told, was that inadequate education led to poverty. The solution was to educate the poor and to do so from their very first years of formal education.

Professor Urie Bronfenbrenner, testifying at a Congressional hearing on the Economic Opportunity Act of 1964, argues for linking anti-poverty efforts to early childhood education:

> The bill before you gives primary attention to the age group between 16 and 22. Well and good, but it does not hit at the heart of the matter. In his message on poverty, the President [Johnson] declared that the intention of the proposed legislation was to strike poverty at its source. To me, this means striking at poverty where it hits first and most damagingly--in early childhood. We now have research evidence indicating that the environment of poverty has its most debilitating effect on the very young children in the first few years of life.... What is more, the effect is cumulative; the longer he remains in school, the further behind he gets. Understandably such children become a major source of our dropouts and delinquents. But there is a way to reverse the process.[3]

The way proposed was to concentrate on early childhood education, making the attack on poverty as cost-effective as possible. Thus, Bronfenbrenner continued," you change what will be a vicious circle into a benign circle because once [poor children] learn how to learn then they can take over and they start learning anywhere they are. That is the important business, to get the thing going early....[4]

This sense of certainty by the researchers was embraced by the politicians. President Johnson's 1965 message to Congress declared that "Education must begin with the very young. The child from the urban or rural slum frequently misses his chance even before he begins school... [by the eighth grade] the handicap has grown too great for many children."[5] During the 1965 hearing on the War on Poverty program, Sargent Shriver testified that "with that child, that 5-year-old, we will have set in motion a process, a possibility, a chance which in our time, in our generation, can spell the end of poverty."[6]

These hopes seemed to be confirmed by the Head Start Program, established in 1964, which at first reported glowing results for its new preschool programs. Those who addressed the ESEA hearings relied on these results as evidence of the possibilities of breaking the cycle of poverty through programs concentrating on the early years. Frank Keppel, then OE Commissioner, testified that:

> We are getting most interesting evidence on the "necessity," I guess that is the word I should use, of preschool education for children from disadvantaged families ... they start behind the eight ball in the first grade ... therefore the need for preschool. ... An article in the Office of Education's magazine ... shows [that Head Start] ... is not expensive but has an immense payoff.

On the other hand, Keppel said: "We rarely succeed in reaching the deprived in later and frustrating school years.... We are coming to recognize that our greatest possibility lies in early childhood education."[7]

Among all the social scientists, perhaps the most influential was Professor Benjamin S. Bloom. Testifying before the Committee on Education and Labor, he reported that, "while much can be done for culturally deprived children at various ages, by far the greatest effect can be produced in 1 to 2 years of preschool experience in the period of 3 to 5 [years of age]." The rapidity of cognitive development in the early years explained this fact, according to Bloom:

> in general, what we find is something on the order of 50 percent of the development of the child, in a number of areas, occurs before age 6. The schools quite frequently get the child after a considerable amount of development has already taken place. Therefore, we begin to see the period of 3 to 5 or 3 to 6 as a very crucial period for development in many areas.[8]

Some members of the committee were concerned that counting low-income children between the ages of 5 and 17 for eligibility would hamper the use of Title I funds for preschool programs. DHEW Secretary Celebrezze assured the members that preschool programs would be an appropriate use of funds. In fact, he added, "if the local district wants to take most of their money and put it to preschool, they can do that under Title I, but I think it should be left to the local district based on greatest need."[9]

The ESEA program was faced with a potential target group of nearly 10 million disadvantaged children. The first-year appropriation was $959 million, which, at the per-pupil target figure of $200, was expected to serve about 4.8 million students.* To those charged with implementing the new program, it seemed sensible to begin local Title I programs at the lower grades, gradually phasing them into the entire school system. Professor Bloom, after all, had testified that "there is no doubt that you get a larger return for the dollar the earlier it is in the career of the child."[11]

This strategy was premised on the belief of ESEA's supporters "that the ambitious goals of ESEA would require years and annual appropriations at least 3 to 10 times greater than those of the first year."[12] Such expansion would provide the money necessary to assist poor students in all grades--eventually. But for the moment, not all could be served, and the problem was where to begin. The answer seemed self-evident: begin with the very youngest students.

The anticipated expansion did not materialize. In terms of 1967 dollars, as Table 6 reveals, Title I authorizations actually increased only 20% over 10 years. A program that was originally supposed to begin in the early grades has largely ended there as well. Between 1965 and 1969, the early childhood and early elementary orientation of the Title I program was effectively cemented. In 1966, for example, Congress cut back many of the antipoverty programs, but actually exceeded the administration's budget request for Head Start.[14] These years brought a realization that the War on Poverty would never be as lavishly funded as initially intended. Early childhood and early elementary education was stressed, to the virtual exclusion of anything else. In his 1967 Message to Congress on Children and Youth, President Johnson said:

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*In fact, about 8.3 million students received services at an average per pupil expenditure of $120 during 1965-66.[10]

Table 6

APPROPRIATIONS FOR ESEA TITLE I

FY	Appropriations	Real (1967) Dollars	Percent Change
1966	$ 959,000	$1,002,613	--
1967	1,053,410	1,068,258	6.5%
1968	1,191,000	1,168,792	9.4
1969	1,123,127	1,051,518	-10.0
1970	1,339,050	1,183,533	12.6
1971	1,500,000	1,260,822	6.5
1972	1,597,500	1,296,040	9.5
1973	1,585,185	1,236,397	-4.6
1974	1,719,500	1,230,411	-0.5
1975	1,876,000	1,208,062	-1.8
Percent change over 10 years = 20.5			

Source: U.S. Office of Education, Office of Planning, Budgeting, and Evaluation[13]

> Recent studies confirm what we have long suspected. In education, in health, in all of human development the early years are the critical years. Ignorance, ill health, personality disorder--these are disabilities often contracted in childhood: afflictions which linger to cripple the man and damage the next generation.[15]

In 1968, an evaluation of Head Start showed immediate gains from the program and implied that--given the proper conditions--the gains would be sustained. Although these findings were later severely challenged, at the time they gave support to the "organismic paradigm,"* which postulated the critical importance of the early stages of human development. Relevant research sought a "magic" age for initial government intervention. In hearings on legislation to extend Head Start in 1969, Dr. Geiger of the Tufts Medical Center reported research indicating that deprivation would cause the capacity for learning to drop markedly in the first 18 months of life, Professor Bloom restated his findings that 50% of intellectual development occurs by age 6, Dr. Schaefer of NIMH identified age 3 as the magic age at which intervention was most important, and Dr. Cooke of Johns Hopkins University said that early intervention was advisable for the rehabilitation of children because trying to correct the deficiencies of a disadvantaged adult generation would be more costly and more difficult. Finally, Alice Keliher, an advisor to the Head Start and Parent Child Center programs, testified that, "later care of delinquents and criminals who were once children, who might have been guided into a good life, is 10 to 20 times more costly [than day care centers]."[16]

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*The organismic paradigm is discussed briefly in Chapter V.

At the local level, school districts used Title I funds to either hire specialists--remedial reading teachers, diagnosticians, evaluators, counselors--or to make specialists out of the existing staff through retraining.[17] This approach seemed to satisfy the Title I objective of providing money, separate from general funds, that would improve the achievement for target students. The specialists were distinct from other staff and could be expected to produce better results owing to their greater expertise. Identifying these specialists with early grade activities, also stressed the importance of early intervention. After all, that is what they were trained to do.

This elementary level orientation of Title I has persisted. Its wisdom, however, is increasingly questioned, at least among academicians. Evaluators have found that within-year gains from Title I, Head Start, and other early childhood programs do not persist without continued services through the later grades.[18] The very basis of the early childhood, early elementary orientation has come under increasing criticism. Eleven years' experience with Title I indicates that, while early grade services are an important part of a compensatory education strategy, they cannot be the only part of an effective strategy. Rather, low-achieving students may require special services during their entire school career.

The views of social scientists regarding the early childhood years have evolved over the last decade. Early intervention now seems to be a less certain cure for social ailments. It is perceived as one of a larger number of possible, partial cures. But once established, federal policies are less likely than research opinion to change with the times. Title I has been a most inflexible instrument. Once the legal and administrative structure of the program was set into place, the early grade orientation of Title I became difficult to alter. The balance of this chapter discusses that programmatic development.

Legislation and Legislative Intent

ESEA would not have been adopted by Congress unless it had overcome concerns about federal control of education and aid to parochial schools. Both concerns were addressed by leaving many basic program choices to state and local initiative.[19]

Although there was a substantial belief that programs at the early grades would probably be most successful, the legislation did not express a grade level preference. The 1965 legislative history emphasized post-school outcomes--better jobs, better incomes, lower delinquency rates, lower welfare rolls, lower crime rates--as long-range goals of the program.[20] In keeping with these goals and with the compromises establishing local control of the program, the bill could not be overly directive.

Between 1965 and 1970, however, there was a marked change in the political climate of education programs. The 1970 Amendments to Title I reflected the grave concerns about the program that had arisen from federal audits, such studies as the Washington Research Project,[21] and ambiguous evaluation reports. Seeking to respond to these concerns, the Committee on Education and Labor strengthened the legislative language regarding fiscal controls and urged federal and state administrators to exercise their full authority to insure compliance.

Turning to the issue of effectiveness, the committee expressed dissatisfaction with evaluations that were generally subjective. It referred to the Fourth Annual Report of the National Advisory Council on Education of Disadvantaged Children, which stated that "success" with Title I children "requires a concentration of services on a limited number of children." It also stated that "the committee wishes to note that evaluation reports, by and large, indicate that Title I projects at the preschool and elementary levels and those concentrating on reading and communications appear to be the most promising."[22]

Apparently, however, the Congress was unwilling to incorporate early grade concentration into the legislation for Title I, Part A. However, the same end was served in a less direct way. Pointing to the need for greater concentration of services, as well as indications that early grade projects were more successful, the 1970 Amendments created Part C of Title I ("Special Grants for Urban and Rural Schools Serving Areas with Highest Concentrations of Children from Low-Income Families"). Part C explicitly did two things:

- Provided extra funds to particular problem areas: urban areas with very high concentrations of low-income children and rural areas with inadequate local resources to mount adequate programs.
- Specified the grade level to which funds were to be targeted: preschool or early elementary. Secondary programs could be funded under Part C only where the LEA and SEA had determined there existed an "urgent need" for them and that they would be "at least as effective" as early grade programs.

These provisions for the first time in the statute singled out a particular segment of the potential target group (children in early grades) for favored treatment. The requirements of "urgent need" and "at least as effective" determinations by both the local education agency (LEA) and the state education agency (SEA), when coupled with the committee's words regarding the greater effectiveness of early grade programs, made the preference clear.

Finally, Part C required a plan to be submitted by the LEA detailing how the added funds were to be used and including provisions to insure "effective use of all funds under Title I" (emphasis added).[23] In line with the principles of concentration, many districts could be expected to adjust the more discretionary Part A funds so that they conformed to the specific requirements pertaining to Part C funds. Noting the early grade priority of Part C, the committee added:

> Although the law does not authorize the Commissioner to direct the use of Title I funds in specific types of projects, the committee wishes to encourage the Commissioner to disseminate information about successful Title I projects and assist State and local educational agencies in adopting or adapting projects which hold the greatest promise in meeting the special educational needs of disadvantaged students.[24]

And which projects did the committee feel were most successful? Early grade projects. Part C thus appears to be an attempt to do indirectly what the Congress would not do directly--tell the locals how and on whom to spend the ESEA money.

This amendment, together with the accompanying statement of Congressional intent, introduced into statutory law two related ideas that had previously only been a part of federal program administration policy: a stress on "prevention" rather than "remediation," and the importance of "concentrating" funds. "Prevention" meant a stress on early grade projects, which were believed to obviate the need for "remediation" or later grade projects. The need for greater concentration of services was based on the notion that some minimum per-pupil expenditure was needed for any given project. The committee report linked the idea of financial concentration to that of focusing on the early grades.[25]

Thus, in a climate of disillusion over the results of Title I, the use and management of funds, and a desire to make compensatory education more cost-effective, the stress on early grades, strongly encouraged between 1965 and 1969, was further strengthened by revisions to the Title I law in 1970. In 1974, Part C was repealed.[26] The early grade policy, however, remained part of federal and state program administration. The following sections discuss how the law was interpreted and implemented by the program administration, and how the early grade policy became imbedded in the Title I program.

Federal Administrative Influence: Regulations and Guidelines

After a law is passed by the Congress, it is the task of the appropriate administrative agency to devise, publish, and enforce regulations to implement that law. In the case of education programs, it is DHEW that is responsible for regulations. The Title I regulations adopted by DHEW make it possible for districts to pursue the elementary policy, but the regulations do not, however, compel such a focus. The situation is more ambiguous with respect to guidelines. Why do we have guidelines and what are they?

Federal Guidelines

Federal guidelines--technically called Program Guides, Directives, or basic criteria in the Title I program--have traditionally been the prime vehicle by which DHEW has shaped Title I policy. These guidelines have effectively promoted the early elementary orientation in practice. They have been particularly effective in this since they attempt to explain and expand on the regulations. The expansions have included a heavier dose of policy preference than the more legalistic regulations.

Program Guide 44 (PG44) has been one of the most, if not the most, influential program documents since Title I's inception. The guidelines were created in response to demands from OE's critics for additional rules, particularly with respect to concentration and needs assessment. Many local officials, experiencing both federal audits and adverse publicity, wanted a more specific set of directions regarding Title I.

Our reviews of documents pertaining to Title I and discussions with local officials indicate the great weight given to guidelines. Federal auditors have used PG44 frequently, especially in judging the appropriateness of needs assessments. In our request for state guidelines, many officials emphasized the importance of PG44. In fact, a number of states either use that document as their state guidelines, quote from it liberally, or append it to their own rules. With the promulgation of the 1976 Title I regulations, many state officials asked OE to what extent they could continue to rely on PG44.

Although the legal status of Title I guidelines is uncertain, school officials are in a very poor position to debate their legality with federal officials. Since DHEW suggested that close adherence to the guidelines would effectively insulate district programs from troubling audit disputes, it is difficult to imagine the prudent local administrator choosing any other option. But "law by guidelines" is bad administrative practice. Unlike regulations, the guidelines were not published in the Federal Register. This vital measure of control over administrative interpretation of the law--and thus control of administrative abuse--does not exist.

The Title I law says that SEAs may approve LEA applications for grants after the former has determined the LEA's eligibility, "consistent with such basic criteria as the Commissioner [of Education] may establish."[27] These criteria include guidelines, the first of which was Program Guide 44 in 1968, which was continued in force until the recent adoption of the 1976 regulations. Key provisions of PG44 appear to have directed school districts away from programs and projects for adolescents. Some of these provisions are discussed below.

The Selection of Attendance Areas for Title I Projects--The ESEA legislation requires that Title I projects be in attendance areas having high concentrations of children from low-income families.[28] The unavailability of full funding has necessitated ranking attendance areas by their relative concentrations of such children and serving them accordingly. The regulations state that such ranking may be based either on the percentage or on the number of low-income children in each attendance area. The guideline that interprets this regulation, however, indicated that the percentage method was the preferred one for ranking purposes unless there were wide variations in the sizes of the populations, or the numerical method or some combination of percentages and numbers of low-income children is required "for reasons of equity."

The choice was influential, for the percentage method will normally favor elementary over secondary schools in a given district. In the hypothetical district shown in Table 7, the junior high school would be ranked first under the number method, but fourth under the percentage method.[*]

Table 7

EXAMPLE: TITLE I ATTENDANCE AREA SELECTION DATA

	Elem A	Elem B	Elem C	Elem D	Jr. High
Enrollment	100	100	100	100	400
No. low-income children	50	45	10	40	145
Percent low-income children	50%	45%	10%	40%	36%

Comprehensive Assessment of Needs--Section 2 of PG44 required LEAs to "evaluate the evidence concerning the educational deficiencies of children who live in the eligible attendance areas" to determine "educationally deprived children" eligible for services under the legislation. Students' needs are to be ranked in order to serve students with the "greatest need for assistance."[29] The guideline also stated that this ranking was to correspond to grade levels (preschool, early elementary, later elementary, and secondary), thus obliging the LEA to determine which of its included grade levels has the "highest priority" needs.

PG44 generalized about the needs at each level, in a manner clearly favorable to an emphasis on young children:[†]

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[*] Some states extend this provision by ranking schools separately by grade levels and serving early grades first as a matter of policy.

[†] Unless otherwise indicated, citations are to regulations in effect prior to the revisions effective on September 28, 1976 (41 F.R. 42894).

> - Preschool Children
>
> The general need for early diagnosis and for compensatory educational services for preschool children in predominantly low-income areas is widely recognized.... The applicant should definitely consider the needs of preschool children in planning its Title I program....
>
> - Children in Early Elementary School
>
> The needs of children in the early elementary school grades should be carefully assessed.... There is considerable evidence that special programs can be helpful for educationally deprived children in those age groups.... Applicants should identify the needs of children in the early elementary school grades to preserve and build on progress they may have made in Head Start and Title I preschool classes. Priority consideration should be given by the applicant to such children....
>
> - Children in the Later Elementary School and Secondary School Years
>
> It is in the later elementary and secondary school years that educational deficiencies become most apparent and most difficult to treat. By this time many of the children are no longer responding in any positive way to their school environment and are well on their way to becoming dropouts. Their academic and behavorial problems are extremely varied and complex and will require the most careful study in order to establish the needs on which an effective compensatory program can be developed....[30]

This language does not prohibit the provision of services to students in the upper grades. It does, however, suggest that programs for younger students will be most effective and that these effects will carry over to the later years of a child's life. Although school districts are told to identify the needs of children in the early elementary grades to "preserve and build on" progress made in earlier programs, the same reasoning is not extended to later elementary and secondary school children. "Considerable evidence" regarding the effectiveness of special programs for early elementary students is alluded to. By contrast, it is the problems that beset projects for older students that are emphasized.

The Introduction to PG44 states that it is a "set of general statements of the essential characteristics of an approvable Title I program," which must be "taken into account." For this reason, local school authorities might reasonably decide to emphasize the early grades in deciding who will be served by Title I.

Program Design--Subsection 4.2 of PG44 requires demonstrations that the Title I program is "based on a consideration of the relative needs of children at all ages and grade levels and is designed to meet a limited number of high priority needs...," that resources are concentrated on those children most in need of special assistance, and that "normally this process will involve determinations of both the needs of individual groups of children and of the possibilities for success in working with those groups" (Emphasis added). Section 2 of the guideline, discussed above, identifies the age groups that offer the greatest "possibilities for success," (preschool and elementary children) and age groups that are "most difficult to treat" (secondary school children).

The underlined provision could well conflict with the "greatest need for assistance" criterion, set forth in the regulations. As lawyer Robert Silverstein asks:

> Can an LEA, in accordance with a need assessment which has identified a particular group (group 1) as having the greatest need for assistance, nonetheless design a program under Title I for another group of children having less need for assistance (group 2) because the possibilities of substantially improving educational attainment [i.e., possibility of success] is greater for less needy group 2 than it is for group 1?[31]

While the "greatest possibilities for success" criterion is no longer being urged by program administrators, possibly because of the tension with the "greatest need" criterion, we can only surmise the extent to which the former provision, which remains in PG44, has affected the selection of participants for Title I.

Subsection 4.3 of PG44 requires that the Title I program be based on clearly stated objectives and desired outcomes that "if executed as planned, will very likely result in reduction of educational deficiency." Taken alone, this provision has no effect on choice of grade levels. However, when read together with Section 2's suggestion that early grade projects are more likely to reduce educational deficiency, the effect is to strengthen the early grade orientation.

Summary

Regardless of its actual legal status or continued applicability, PG44 has been widely referred to by state and local officials in designing and operating Title I programs and projects. It has remained unchanged since 1968, and extensive excerpts from it are used in state level guidelines. While its legal status may be questioned, its practical importance can scarcely be over emphasized. The clear effect of several sections of the guideline is to prefer elementary to secondary school Title I projects.

State and Local Policies

In theory, Title I left most responsibility for program choices with local authorities, at least initially. Nonetheless, the political and research climate, combined with federal administrative preferences, seems to have had the effect of inducing state and local authorities to concentrate services in the early grades. The section below discusses the extent to which state policies have reflected the federal early grade orientation.

Program Implementation

Prior to the passage of ESEA, only a few states and localities had initiated compensatory education programs.[32] Thus, state and local administrators, as well as federal officials, sought to find out how programs could best be initiated. The federal advice seemed to be: begin services at the early grades and extend Title I into the higher grades as appropriations increase.

ESEA also included a project evaluation requirement unprecedented in federal social legislation.[33] State and local administrators were obviously concerned that the requisite reports be favorable. The word from Washington seemed to be that, given the apparent success and the popularity of Head Start, early grade projects would likely be a fruitful starting point. This climate and philosophy, coupled with the federal guidelines' appearance in 1968, set the tone for state level policies.

State Education Agency as Title I Policymaker

The SEA plays a pivotal role in the Title I program. A report on the program's legal framework notes:

> A major function of SEAs is to review and approve applications for Title I funds submitted by LEAs. Additionally, SEAs (a) distribute Title I grants to LEAs; (b) promulgate general rules concerning the administration of Title I; (c) undertake evaluations of the effectiveness of Title I programs; (d) provide technical assistance to LEAs; (e) interpret the federal and State LEA program requirements; (f) disseminate relevant information to LEAs, including the Title I legislation, federal regulations; (g) monitor the LEA Title I programs by making on-site visits to determine whether the LEA is meeting its assurances and acting consistent with the requirements contained in the legislation and regulations; (h) establish effective fiscal control and fund accounting procedures to ensure compliance with the statute and regulations; and (i) enforce compliance with the requirements contained in the statute and regulations.[34]

Thus, SEAs are authorized to set their own policies. This authority may be exercised in at least three ways: the promulgation of state level guidelines (a power not explicitly granted in ESEA or federal regulations but assumed by states and tolerated by federal agencies), issuance or publishing of written statements of policy, and informal or oral indications of state policy on specific request. The analysis of state policies that follows relies only on the first two indicators of state policy, as they are most susceptible to documentation. It is based on the state level Title I guidelines from 38 states* and on state Title I reports for 48 states.

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*Several states indicated an intention to revise their guidelines upon final adoption of the March 1975 proposed regulations for Title I. Any changes in state policy or practice that were required or occurred as a result of the 1974 Amendments to Title I (P.L. 93-380) are not reflected by the documents used in this study.

State Policies and the Early Grade Orientation

Table 8 summarizes state policies: the guidelines and policy statements in 31 of the 48 states contain a preference for orienting Title I toward the early grades. When the preference is directly stated, we classified it as an expressed policy. For example:

> In all cases where categorical aid funds are insufficient to serve all eligible children, the youngest eligible children shall be the first served.[35]

When the policy is expressed indirectly, by reference to other sources, we classified it as an implied policy. For example:

> It seems the older the children, the more difficult it is to get them to participate in the program. Hopefully, with continued Title I programs over the years there may be no need for Title I for high school age children.[36]

State Guidelines

State guidelines range from restatements of the federal law and regulations to expansive discussion of "research findings" and "most effective" project designs. The restatements are most neutral with respect to the selection among grade levels of projects to be funded, reflecting the delicate balance of many of the federal policies and documents. Discussions are more likely to recommend or require concentration of Title I projects in the earlier grades.

Only one state's guidelines emphasize a policy of neutrality among grade levels. No state favors older students. Fourteen states' guidelines express a policy favoring the early grades and three states imply such a policy.*

Policies that contribute to the early grade orientation among Title I projects are usually stated in guidelines explaining the Title I concentration requirement and the requirement that services be provided to

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*The balance of the information contained in Table 8 comes from the state reports discussed below.

Table 8

STATE POLICIES REGARDING GRADE LEVEL PARTICIPATION IN TITLE I

States Expressing an Early Grade Orientation for Title I:

Arkansas
California
Connecticut
Georgia
Indiana
Kansas
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
New Hampshire
New Jersey
New York
North Carolina
Ohio
South Carolina
South Dakota
Tennessee
Texas
Vermont
Virginia
West Virginia
Wisconsin

Total: 27

States Implying an Early Grade Policy

Alabama
Montana
Nebraska
Oregon

Total: 4

States Expressing a Policy of Neutrality Among Grades:

North Dakota
Pennsylvania

Total: 2

States for Which No Express or Implied Policy Could be Ascertained:

Arizona
Colorado
Delaware
Florida
Idaho
Illinois
Iowa
Kentucky
Nevada
New Mexico
Oklahoma
Rhode Island
Utah
Washington
Wyoming

Total: 15

Grand Total: 48*

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*Data for Alaska and Hawaii not available.

Source: Title I Guidelines and Annual Evaluation Reports published by individual states. For specific provisions, see Appendix A those students in greatest need of assistance. The state guidelines often restate the interpretations of these requirements found in the federal guidelines. In many cases, the state provisions express even stronger preferences:

> California (1974)--In all cases where categorical aid funds are insufficient to serve all eligible children, the youngest eligible children shall be the first served.
>
> Connecticut (1975)--The best compensatory education efforts tend to concentrate services on children in the first years of school.... More can be accomplished in early skill learning as a preventative measure than in upper-grade remediation.
>
> Massachusetts (1975)--Federal policy advocates concentration of funded [sic] on a limited number of children in a limited number of eligible areas. Massachusetts recommends further concentration of funded programs on the early childhood category (pre-school through grade 3).... Research findings point out ... early experiences are crucial to later learning .... Children come closer to achieving their maximum intellectual potential when they receive proper stimulation during their most formative years--2 to 6 years of age.
>
> Michigan (1975)--Predicated upon the findings of the needs assessment: a. The first priority for use of Title I funds shall be for pre-primary ... and elementary education (grade one through grade six)....
>
> New York (1973)--Particular attention needs to be focused on pupil performance in grades 1-6. [The prior provision was: "emphasis should be on programs for grades 1-3"].

State Title I Reports as Policy Documents

In state Title I reports (evaluations required annually by the federal legislation), 13 states declared a preference for stressing elementary programs--this in addition to the 14 states that have adopted similar guidelines. Three reports imply an early grade preference, while two states express a policy of neutrality among grade levels. As with the guidelines, no state favors the later grades. The following excerpts are illustrative.

> Indiana (1972)--LEA's were encouraged to concentrate Title I funds on early childhood education and basic skills subjects in lower grades.
>
> Maryland (1974)--The primary focus of Title I projects in Maryland is on reading readiness and comprehension in prekindergarten to grade three. This concentration ... is in line with priorities designated by the Maryland State Board of Education and reflects the belief of the State Title I staff that early intervention or prevention, with a strong program in basic skills is a key to any effort to compensate for the educational disadvantages associated with poverty.
>
> Mississippi (1974)--The concentration of Title I activities [in grades 2-6] ... is an adequate approach to offering special services to those students who may not always be the most in need but certainly are in a stage of their education span where additional efforts will do the most good.
>
> Ohio (1974)--Title I activities in Ohio are directed toward young children ... following the adage "an ounce of prevention is worth a pound of cure."
>
> Texas (1974)--One of the stated objectives of the Title I program, as administered in Texas, was to serve a greater percent of elementary level pupils than secondary level pupils in the hope that early treatment of educational problems would result in a reduction of need as the pupil proceeds through an educational program.

In analyzing its achievement data, one state was "surprised" to see that the gains in grades 1-3 were no higher than gains in other grades. The report continued:

> Typically greater gains are made in the primary grades ... some possible explanations [for the fact that higher gains in grades 1-3 were not reported] ... are
>
> a. The SRA tests might not be as appropriate to measure reading gain at the primary level as they are at higher grade levels.
>
> b. The elimination of some schools at certain grade levels because all the required data were not available may have biased the sample.
>
> c. The sampling method could have been improved ....

d. The number of participants at grades 9, 10, 11, and 12 is relatively small and the results at one school could have considerable impact on the average gain for that grade level....

e. The conditions under which the tests were given, scored and reported could vary greatly from school to school.[37]

The possibility that projects in the later grades were doing as well as those in the early grades was apparently not considered.

Summary

In administering Title I, most states currently stress serving students in the early grades. And as the figures in the preceding chapter demonstrate, most districts choose to serve the primary grades predominantly. Whether this is a reflection of the power of state policies or of independent local preferences for a stress on elementary school age youngsters, remains unknown.*

Conclusions

The elementary school orientation of Title I, initially thought to be a phase in the program's development, has persisted--even grown stronger--since 1965. It appears to some extent in federal law, to a greater extent in federal guidelines, and most vividly in state guidelines and policy statements. This orientation was premised on the beliefs that an early "innoculation" with compensatory education would solve later learning problems, and that adolescents were too old and too fully formed to derive benefits from the special assistance of Title I. Evaluations of early grade Title I projects have cast substantial doubt on the first proposition: early gains from Title I, Head Start, and other early childhood programs do not persist unless additional special help is provided. The next chapter discusses the growing disenchantment--at least among scholars--with an early intervention strategy that ignores adolescents.

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*In this context, two points should be noted. First, the SEA reviews all LEA applications for Title I funds and may reject or require amendment of the applications should the SEA find them unacceptable. Second, the SEA may allocate the amount of the maximum grant among LEAs with overlapping jurisdictions (as where there exist separate high school districts) "in such a manner as it determines will best carry out the purposes for which the grants under Title I of the Act are respectively made available.[38]

It would be misleading to suggest that local district personnel have been the unwitting victims of federal and state policies. We have no record of the preferences that local administrators,[5] teachers, or parents brought to ESEA and no way of knowing what might have happened if federal and state policies had not pressed toward the early grades. But most intelligent and well-intentioned local staff would be persuaded by the abundance of scholarly articles extolling the virtues of primary grade Title I projects and by the simple common sense of the early intervention theory, particularly when the other side of the case was never presented. And prudent administrators were sensitive to the inevitable hassels and possible financial consequences of disregard for state and federal policies, whatever their legal status.

It is unfortuante that the demands of policies once in motion leave little time and no incentive for local district staff or state or federal personnel to reflect on whether the policies are either wise or effective. If the case for exclusive early intervention is less persuasive now than it appeared a decade ago, federal and state officials have been reluctant to share this news with their local counterparts and unwilling or unable to adjust their actions accordingly.

A federal policy initiative to continue services into the later grades should be premised both on the theoretical plausibility and on evidence that remedial efforts can be effective in the upper grades. Succeeding chapters treat both premises through the recent literature on cognitive development and adolescence, through evidence derived from a recent survey of adolescent compensatory programs in seven states, and with an assessment of secondary school Title I programs.

The findings of this research do not suggest that channeling federal monies exclusively into adolescent projects will cure the basic skills problem. To substitute one panacea for another would be to ignore the lessons of Title I history. We propose only that services be provided in a manner that continues and reinforces student progress in the early grades. Without such reinforcement, the benefits of Title I will too often be lost over time.

V THEORIES OF COGNITIVE DEVELOPMENT

The Organismic Paradigm

The organismic paradigm was fundamental to the compensatory education strategy, which developed during the 1960s, of favoring a focus on young children. Recent research casts serious doubt on its validity.

The paradigm may best be treated as a set of component concepts. First, human development--physical, emotional, psychological, and cognitive--occurs in stages that are inextricably related to specific ages (in months or years) of the child. Second, success in a later stage is determined by the experience of the organism (child) in earlier stages. Therefore, the earliest stage is the most important for determining final outcome. Third, insult or deprivation during an early stage may arrest or warp development in that stage in a way that precludes the normal attainment of higher stages; such damage is largely or wholly irreversible. From these three component concepts, a fourth was derived that supports the present system of compensatory education: If insult or deprivation can have significant and lasting negative effects, then enrichment, or at least compensating for the deprivation, should have significant and lasting positive effects if administered during the critical periods. This concept assumes, among other things, that the nature of the deprivations important to the cognitive development of the child can be identified adequately, that adequate remedies can be devised, and that these remedies can be applied effectively by educational institutions on the basis of a generalized model.

The organismic paradigm appears to be an inaccurate description of reality on several grounds. For one thing, cognitive development may not occur in irreversible stages, contrary to the tenets of the organismic approach. For another, although certain environments--notably, institutional settings that provide no consistent caretaker--may well permanently stunt children's cognitive development, these are not the kinds of environments in which poor children mature; only the class-biased would argue otherwise. And, as Jerome Kagan has shown through a study of Guatemalan indian practice,[1] even isolating infants in dark, unnurturing settings appears to cause no lasting damage to them. It may be that the ill effects of extreme deprivation are at least ameliorated, if not overcome, by later entry into normal family life and healthy participation in the intellectual and social life of the community.

But the biggest problem is that the extension of this logic to the assertion that enrichment of the environment will have significant and lasting positive effects only if provided during early childhood is also subject to serious question. Reviews of Head Start and other American early childhood education programs reveal that such ventures have had at best imperfect success.[2]

Stearns[3] studied the effects of Head Start programs on intelligence and later school performance. She found that many programs had no noticeable effects, but that some did appear to raise IQ and to provide a stronger start in school. However, it did not appear that these good effects carried over into the school performance of the students, and IQ effects appeared to dissipate over time. White carried out a comprehensive review of all government involvement in early childhood education programs. His report, clearly the most extensive and current study available, concludes that compensatory programs in general "offer little evidence of positive overall impact on eligible and participating children."[4] While preschool intervention programs produced an immediate increase in IQ scores for most of the participating children, it is very difficult to determine whether this represents genuine intellectual progress or improvement in self-confidence and test familiarity. The effects on IQ of most preschool interventions do not persist beyond the second or third grade. In a commentary on this review, Carl Bereiter remarked:

> Ten years ago there was no decisive but an abundance of suggestive evidence supporting the hypothesis that early childhood education and experience is crucial to cognitive development. After a decade of extensive basic and applied research, we still do not have any decisive evidence, but the trend suggestive evidence has been rather consistently against the hypothesis.[5]

Thus the actual results of early childhood compensatory education programs do not support the assumption that enrichment in early childhood (but beyond infancy) has lasting cognitive effects that can be measured.

It might be argued in response that early childhood education as practiced in the United States is simply too limited to secure the kind of enrichment contemplated by the organismic paradigm. Perhaps this is so. Perhaps if children were removed from poverty homes altogether, or if parents in poverty were obliged to participate in parent-child developmental training, the organismic paradigm would be vindicated. However, aside from the sociological questions such procedures raise, we doubt that such programs would prove politically or practically feasible.

Adolescence and Cognitive Development

To a certain extent, compensatory education has backed itself into a corner by linking itself so firmly to a strategy of early intervention. This is necessitated by the belief that the greatest quantity or quality of the development of intelligence occurs and can be influenced in the preschool years. Experience now suggests at least that intelligence is less susceptible to permanent influence in the early years than many researchers have previously believed.

On the bright side, however, it also appears that intelligence may be more flexible, more differentiated, and more prolonged in its development than the organismic paradigm assumed. If so, then compensatory education need not try to accomplish all its chores during the earliest preschool or school years. Rather, it may be worth providing help to older students as well. Compensatory education for adolescents makes sense when we begin to appreciate the new mental abilities that students acquire during the intermediate and secondary years. Early adolescence is a time of enormous cognitive growth and change, as well as of physical maturity and social experimentation. There is much research to suggest that new intellectual capabilities develop during adolescence that can make the acquisition of both basic and applied skills much easier and much more productive than at any earlier age. In the enthusiasm for early intervention, this research evidence and theory concerning adolescent cognitive development has been largely overlooked. The following pages will attempt to describe at least the general outlines of the theoretical and experimental literature of adolescent cognitive development. This literature is important because it offers an alternative way of thinking about education and child development, and thus may help us out of the present conundrum.

Theoretical Positions

The traditional model of learning has presumed it to be a cumulative, linear process, uniform throughout life and across all subject matters.* The model did not explain how learning occurs, but it was thought to be sequential and cumulative: one thing must be learned before the next, and each step is of approximately equal value and difficulty. Within the last 20 years, the linear model has been challenged by several theories of staged learning. These theories conceive of different kinds of learning, with varying degrees of conceptual complexity, and posit that the ability to understand conceptual complexity increases irregularly as a child develops.

The most widely studied and accepted theoretician in this field is Jean Piaget. Piaget argues that development occurs in sequential stages. Each successive stage comprises different and more complex "structures" that allow the child to perform operations and intellectual tasks different from those possible in the previous stage.† A particular child moves from one stage to the next at certain ages, subject to individual and cultural variation, reaching propositional thinking and formal operations in early and middle adolescence, respectively.[6]

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*Here we encounter the difference between theories of the development of intelligence (the capacity to learn) and theories of learning. Apparently the suggestion of traditional models is that the capacity to learn is developed early in a child's life and is not subject to change thereafter, but learning itself thereafter occurs at a more or less constant rate, determined by an individual's intelligence.

†The three major stages in Piaget's scheme are: the sensorimotor period (typically, birth to perhaps 18-24 months); the period of representative intelligence, including both a preoperational subperiod (approximately 18-24 months to 6-7 years) and a concrete operations subperiod (approximately 6-7 years to 11-12 years); and the propositional and formal operations period (approximately 11-12 years to 15-16 years).

Bayley has come to a similar theoretical conclusion from her longitudinal studies of children's scores on a variety of intelligence and ability-related tests. She concludes that not only the quantity but also the quality and patterns of mental function change over time.[*7]

Gagne presents a third and somewhat similar theory of stages. He hypothesizes that a higher stage is reached or a qualitative change achieved when accumulated small steps of learning are integrated hierarchically. He also posits that stage attainment is not tied to a specific age, but varies greatly with the richness and structure of the environment.[8]

Another variation on stage theory is espoused by Pascual-Leone: In his theoretical model, stage attainment is determined by the three factors of:

- Mental space.
- Specific configurational schemes, such as vocabulary, propositions, numbers, images.
- Executive strategies, used to operate on configurational schemes to solve problems.

Pascual-Leone hypothesizes that all three factors increase with age and that all but mental space depend on learning and experience.[9]

Yet another model of intelligence that relates closely to these is the Horn and Cattell model based on "fluid" and "crystallized" intelligence. Fluid intelligence is hypothesized as being genetically determined and reaches its peak at adolescence. Crystallized intelligence is posited to depend upon learning and grows until old age.[10]

These models disagree on many points, the most important of which is how and when an individual moves to a higher level of cognitive

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[*] Her work and that of Piaget do not insist that adequacy in any stage be dependent upon or predicted by adequacy in an earlier or later stage, although there may be very high correlations.

functioning. What they share, however, is the notion that intelligence or cognitive ability passes through significant stages of development long after the early childhood years.

What Are Formal Operations?

Although the code phrase "formal operations" originated with Piaget's theory, it has come to be used by theorists and researchers of various persuasions to refer more generally to the aspects of maturing cognitive ability that characterize adolescence in most of the theories discussed above. Broadly speaking, formal operations are the acquisition and use of a number of abilities not available to children in earlier cognitive stages. These abilities include:

- Consideration of propositions that are contrary to fact.
- Identification and consideration of all the logical components of a set.
- Comprehension and construction of conceptual hierarchies.
- Abstraction from the particular to the general case and the opposite.
- Use of internalized speech.

Elkind writes that "the major task of early adolescence can be regarded as having to do with the conquest of thought," and that:

> the capacity to deal with the possible as well as the actual liberates the adolescent's thought so that he can now deal with many problems, situations in which the child is stymied. Most importantly, for our purposes, the capacity to deal with the possible means that the future is now as much of a reality as the present and is a reality which can and must be dealt with.[11]

Verbal symbols are used increasingly in adolescence as mediators of conceptualization. For instance, words can be used to integrate the information from one sense (e.g., sight) with another (sound). Verbalization also becomes an important factor in problem solving.[12] Adolescents can manipulate symbols in a way that makes their thought much more flexible than that of the young child. Words carry much more meaning when they can both denote things and symbolize ideas. Young children, on the other hand, seldom understand metaphor, double entendre, or cartoons.[13]

The increasing objectivity in the mental operations of the preadolescent and the teenager allows them to think about ideas not linked to the specificity of space, time, situation, and their own point of view. For this reason the adolescent or preadolescent can understand a legal position. In a conversation, his sense of language includes the handling and transfer of complex grammatical rules, even when the language is not standard English and does not have a formal base (e.g., pig latin, street language), and even when he cannot consciously articulate these rules.

Internalized speech is important in the attainment of silent reading. However, internalized language can be translated into writing only if molded into the language of written style and syntax.[14]

In adolescence, verbal symbols can be used increasingly to mediate conceptualization and thereby become an important factor in problem solving. By the end of preadolescence, higher order concepts can be understood, but their formation and use is heavily dependent on the range of vocabulary.[15]

The ability to consider logical propositions also seems to be related to the development of more sophisticated moral reasoning. The investigations of Kohlberg indicate that, starting at about age 10, adolescents may adopt any of six different types of moral reasoning.[16] The six types form a spectrum with specific and self-interested decisions on one end and generalized, other-interested decisions on the other. They are thought to form an invariable sequence: if an adolescent changes his style of moral reasoning, it is to adopt a higher, more abstract principle. Experiments by Langford indicate that reasoning at the level of formal operations is a precondition for progressing to the higher states in this spectrum.[17]

During early adolescence, children take an increasing interest in themselves and in other people, and this too is related to the ability to adopt an objective point of view. Such changes also seem to be related to the move into new social role patterns.[18] Thus an adolescent is able to consider his future as a jobholder, to understand how his chances of having a good job are related to other skills, such as reading and counting, and to worry about or be pleased by this.

The young child does not distinguish easily between his own thought products and reality. As Elkind has shown, it is not until about the age of 11 or 12 that children begin to reflect upon their own thought processes: "In the adolescent, thought and experience are clearly differentiated, and the adolescent is well aware of the arbitrariness of his hypotheses and their lack of necessary connection with the facts."[19]

In sum, the formal operations developed in adolescence consist of the ability to look beyond one's own immediate experience to understand ideas and situations that have not been experienced. This occurs in intellectual, personal, social, and moral matters and is the prerequisite of competent functioning in adult society.

Who Attains Formal Operations, and When?

While experimental research on Piagetian and other stage models has been going on for almost two decades, it has only been within the last few years that researchers have turned their attention to the development of formal operations ("adult thought" or "complex thought").

Piaget implies that everyone attains formal operations sometime between the ages of 11 and 16. Whether an individual actually makes use of formal operations, he or she is capable of putting these skills to work throughout late adolescence and adult life.

The age at which formal operations is attained seems to be related to a child's general ability level: high-ability children will advance to formal operations earlier in the adolescent age range than will low-ability children.[20] The environment may also affect the age of attaining formal operations and general intellectual maturity. Kagan's work in Guatemala and other countries[21] seems to suggest that even severe sensory deprivation and social isolation during early childhood may slow, but not halt, stage attainment and the development of higher cognitive skills. Other studies indicate that socioeconomic status (SES) and other environmental factors influence the gross age at which new stages are attained.

Jensen suggests a different link to SES.[22] He hypothesizes that there are two different types of learning: Level I (associative ability), which is distributed about equally among all social classes, and Level II (conceptual ability), which is concentrated heavily in middle and upper social classes, though learning opportunities and skills are not equally available.[23]

Dulit argues that some adults rely on concrete rather than formal operations. Dulit's work leaves open the question of whether every adult of normal intelligence eventually attains the potential for formal thought whether or not this potential is turned to use,[24] but this and other studies indicate that at least some portion of the population can and perhaps must be assisted in advancing from concrete operations into formal operations. Elkind emphasizes the view that the potential complexity of thought is internally determined, while the environment--including the effects of deliberate teaching--can at best expand the facility with which such capabilities are used and the range of materials or situations to which they are applied.[25]

Perhaps this is why, even among children who are at the same stage of cognitive development, there are great differences in style and achievement and why not all adults use formal operations. Each successive cognitive stage is like a larger and more sophisticated set of tools. The contents of each set may never be used unless one is taught how to handle and apply the tools and situations arise in which the use of such tools is necessary.

Thus, a central task of compensatory education for adolescents is to help them acquire facility with more-sophisticated tools of memory, logic, and verbalization than they now possess and to assist them in applying these more efficient skills to the learning of new material (be that reading, mathematics, or political science), which less-efficient tools previously made tedious. From this perspective, the basic skills that adolescents need go beyond spelling and vocabulary to thinking itself.

How Do Adolescents' New Abilities Help Them Learn?

As the preceding discussion suggests, the new mental structures of adolescents can greatly affect what they learn, how they go about learning, and how quickly they learn. In contrast to adolescents, young children have limited ability to generalize or think abstractly and conceptually, and they tend to use verbalized information inaccurately.[26] This puts serious limitations on the amount of understanding and the level of teaching possible before preadolescence in any of such subjects as natural science, social science, history, geography, and mathematics, and such teaching is not possible, even in a rudimentary form, in preschool. Young children may learn words, imitate language, and use a certain amount of imagery, but only with preadolescence will they reach the stages in which they can learn the accurate meaning of concepts, methods, and ideas of scientific disciplines.

In the simplest case, adolescents have much better memories than do younger children. Immediate memory span increases significantly during adolescence, along with the capacity to recognize and manipulate categories of things to be memorized.[27] This enables adolescents to process and retain progressively more information after ages 9 or 10 than they could before. This phenomenon was also established by experiments in which it was found that associative learning ability increases with age.[28]

This improved memory seems to be based on a new ability to recognize, generate, and use a much wider variety of "cues" (aids to memory). Several studies confirm that older students (age 11+) are better able than younger children to use a wider variety of cues in order to stimulate both the recall of and attention to associate pairs.[29] In particular, adolescents can respond better to "attention cues" than younger children,[30] including cues linked to certain types of external incentives (money, praise, etc.).[31]

Apparently these cues are more effectively used by adolescents because they are able to construct their own abstract learning strategies, which are more complex and efficient than those used by young children. For example, experiments by Cuvo show adults and young children use different "rehearsal strategies," but the study leaves some doubt as to when this change of strategies is made.[32] Barratt has found significant increases in combinatorial skills for older subjects, which were further increased by giving instruction to the students on how to use these skills.[33] Other studies have revealed that early adolescents are much more able than younger children to locate unobtrusive or concealed cues and to apply them in generalization and abstractions.[34]

What Does This Research Imply for Teaching Low-Achieving Adolescents?

If adolescents are as different from young children as this review suggests, it would seem to follow that the ways in which adolescents are taught should differ from the ways in which younger children are taught, even when both groups are "learning" the same materials or skills. This is an area of research in which little has yet been done. A few studies do bear on the problem of teaching adolescents how to use the more sophisticated tools that they possess.

Studies of stage theory raise the interesting possibility that the educationally disadvantaged population may contain many students whose stage attainment "schedule" is slower than that of their peers. This schedule may be slower either because of or in addition to somewhat lower ability levels or social environments that do less to use the skills of higher stages. Such relationships of variables have been much discussed, but little tested.

If low-achieving, disadvantaged children do move more slowly from stage to stage--and this has not yet been established--then they might benefit from a strategy that began formal instruction later (say age 7 or 8) rather than earlier (as the preschool movement now attempts). Rohwer strongly urges such a strategy.[35] Until more is known, major policy changes are inadvisable. Small-scale experiments testing this strategy would be extremely valuable.

Rohwer's experiments also suggest that low-achieving, low-SES adolescent students can be taught how to learn. That is, they can be taught how to use the elaborative memory techniques and other strategies that are familiar to middle- and upper-income families but unfamiliar to the disadvantaged child. Another implication of his work is that school learning tasks can be presented in ways that make better use of the skills with which low-SES children are familiar. He writes that:

> A given subject matter can be mastered efficiently either by the route of formal (conceptual activity) or that of imaginative conceptual activity...(Low-SES) students should be presented information for learning in such a way as to permit acquisition by means of imaginative conceptual activity.[36]

In a slightly different vein, a growing body of experiments has documented how adolescents can be taught and encouraged to use the increasingly more sophisticated tools associated with formal thought. Much of this work has been done in the field of moral reasoning. In these instances, it was demonstrated that students could be induced to move to the next higher stage of reasoning provided that (1) the teacher could accurately diagnose a student's present stage, pose a problem that reflected the next higher level, and provide an example of action based on that level; and (2) that the student was afforded opportunities to discover the inherent conflict and try out different modes of reasoning. Such studies intimate that most adolescents are capable of attaining higher levels of reasoning in many subjects, but only those whose environment provides them with the opportunity will do so.

Several researchers and educators have attempted this kind of instructed intellectual development. Again, the research permits only tentative conclusions, but these are generally encouraging. The most famous example is a study conducted with the low-SES, minority, poorly achieving students of an Israeli high school.[37] Frankenstein hypothesized that these students could perform better if they were able to translate basic cognitive capabilities into effective problem-solving strategies. In his experimental projects, the thinking patterns of the disadvantaged students were analyzed in order to identify unsophisticated patterns of thinking that were being used. Students were then helped to contrast their own thinking with the characteristics of high-order conceptualization and directed toward strategies that were more effective. Frankenstein's study documents the significant changes in both thinking and achievement that these students made.

Unfortunately, the common methods of teaching basic skills to low-achieving junior and senior high school students differ little from the techniques that are used with children in grades 1 through 3. Sometimes they are even less carefully thought through. Perhaps this practice stems from some vague notion that the 13-year-old who reads at the third grade level must, by definition, think at the third grade level. Perhaps it reflects a notion that basic reading can only use the simplest cognitive skills. Whatever the reason, the result can too often be remedial basic skills education that bores student and teacher alike. If such methods do not fail entirely, they at least fail to take advantage of or develop the higher cognitive skills that are needed if basic skills are ever to be put to the aid of other learning situations.

In a few reported instances, curricula have been developed that draw on particular mental or social characteristics of the older child. For example, the R-3 program of basic skills pioneered by the San Jose, California, Unified School District in cooperation with Lockheed relies heavily on gaming and simulations exercises that draw on the ability of adolescents to generalize from abstract to concrete situations. Another method of working with low-achieving adolescents is cross-age tutoring, which relies on the ability of adolescents to assume a variety of roles in sequence. Interesting and innovative projects have been designed around the use of both monetary and nonmonetary incentives for learning that rely on the ability to discriminate between the values of different rewards and to appreciate both their present and future values.

Alternative teaching strategies are described in Chapter VI. What the existing literature indicates is that although we know more and more about adolescent thinking, few basic skills projects, compensatory or remedial, capitalize on the special cognitive characteristics of adolescents. Several attractive and intuitively appealing project designs exist, however, and will be discussed in the following chapters.

VI TITLE I ESEA AND ADOLESCENT PROGRAMS

The theoretical evidence is persuasive that adolescence is a time of important intellectual change and potential. But the central question is whether this potential can be turned into better basic skills under the special conditions of a federal categorical program.

The most extensive data concerning adolescent basic skills instruction come from Title I programs. As Chapter III notes, state and federal administrators have repeatedly asserted that compensatory or remedial programs for adolescents are less effective than programs for students in preschool and primary grades. Grade-equivalent (g.e.) gains are said to be smaller in intermediate programs than in primary programs, and adolescent programs are viewed as less effective at moving disadvantaged students toward national norms. How valid are these assertions?

Grade-Equivalent Gains

A previous SRI study[1] analyzed 231 state level Title I reports from 50 states and the District of Columbia, spanning a five-year period.* From this broad data base, a variety of analyses were conducted. Three samples of increasing quality are used here. The first, National Sample, includes all states reporting gains by grade level in a given year. The second, Expanded Quality Sample, includes only those states reporting on a random or 50% testing sample. The third, Quality Sample, is limited to that portion of the previous sample that reported in all three years, 1970-71, 1971-72, and 1972-73.

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*The U.S. Office of Education does not at present require any standard format for such reports, and they therefore presented great variations in the type and reliability of data published. In some cases the data problems were sufficiently severe to require exclusion of a report from the study. Thus we were left with a sample that was far from random, but which included all usable data from every available state report during the study period. For a technical description of the data base and methods used, see Appendix B.

The first task in analyzing program effectiveness was to discover whether compensatory programs in intermediate grades indeed had lower records of g.e. gains than did programs in primary grades and to establish any existing patterns of difference in g.e. gain according to grade. Tables 9 through 11 display the results of this analysis using weighted state means.

Table 9

MEAN GRADE-EQUIVALENT ACHIEVEMENT GAIN RATES IN COMPENSATORY READING PROGRAMS, BY GRADE, 1970-71[*]

	1970-71					
	National Sample		Expanded Quality Sample		Quality Sample	
Grade	Rate	N[†]	Rate	N[†]	Rate	N[†]
1	0.9	11	0.8	6	0.8	6
2	0.9	17	0.9	7	0.9	7
3	0.9	22	0.9	7	0.9	7
7	1.0	16	1.1	5	1.1	5
8	0.9	14	1.0	5	1.0	5
9	1.1	12	1.1	4	1.1	5

[*] Weighted by eligible population.

[†] Number of states reporting.

The tables belie the assertions that compensatory education does not work for adolescents. In each year, in each sample, the gains for intermediate grades show two things very clearly. The junior high results consistently meet the Congressional standard of 1.0-months gain for a month in a compensatory education program. Second, the junior high grades display gains that are consistently higher than those of the primary grades.

Table 10

MEAN GRADE-EQUIVALENT ACHIEVEMENT GAIN RATES IN COMPENSATORY READING PROGRAMS, BY GRADE, 1971-72[*]

	1971-72					
	National Sample		Expanded Quality Sample		Quality Sample	
Grade	Rate	N[†]	Rate	N[†]	Rate	N[†]
1	1.0	16	1.1	10	1.1	5
2	1.0	25	1.1	13	1.1	7
3	1.0	25	1.2	13	1.2	7
7	1.2	23	1.3	14	1.3	7
8	1.1	23	1.3	14	1.3	7
9	1.2	17	1.5	10	1.6	5

[*] Weighted by eligible population.

[†] Number of states reporting.

Table 11

MEAN GRADE-EQUIVALENT ACHIEVEMENT GAIN RATES IN COMPENSATORY READING PROGRAMS, BY GRADE, 1972-73[*]

	1972-73					
	National Sample		Expanded Quality Sample		Quality Sample	
Grade	Rate	N[†]	Rate	N[†]	Rate	N[†]
1	1.0	18	1.0	14	1.0	5
2	1.1	27	1.1	18	1.1	7
3	1.0	28	1.1	19	1.2	7
7	1.1	28	1.1	19	1.2	7
8	1.1	27	1.2	17	1.3	6
9	1.3	19	1.3	14	1.5	4

[*] Weighted by eligible population.

[†] Number of states reporting.

It is clear that intermediate programs do not achieve lower average g.e. gains than do primary programs.

In order to determine whether this pattern was produced by a few extremely high-gain programs in the upper grades, a check was made of the 60 instances in which grades 7 through 9 could be compared with gains in grades 1 through 3 in the same states during the same years. Table 12 shows this comparison for 1972-73, the year in which the sample is largest. It shows that the phenomenon of intermediate programs achieving g.e. gains equal to or greater than those found in the primary grades was confirmed within states as well as across states. Thus it appears that the high gains of programs in the upper grades are a consistent trend rather than the artifact of a few unusually successful programs.*

Congress has consistently stressed the importance of achieving month-for-month gains in compensatory programs. The general adequacy of this standard either as a goal or as a measurement of the educational value of compensatory programs is open to serious question, particularly in the intermediate and secondary grades, where demonstrated competence in skills and subject matter is far more to the point. Nevertheless, month-for-month gains are required if disadvantaged students are to attain and remain on an achievement path parallel to the national norm. We found that programs in the intermediate grades meet or exceed this Congressional standard, even in states that cannot report average month-for-month gains in their overall Title I efforts.

Moving Students Toward the Norm

There are any number of ways to define program success. It is argued, for instance, that intermediate grade programs cannot be said to be as successful as primary grade programs unless they were able to move students an equal proportion of the way toward national norms. Phrased differently, this standard holds that equally effective programs at different grade levels need to achieve equal percentile shifts in student placement.

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*Similar results were found for 1970-71 and 1971-72. These analyses are shown in Appendix Tables B-4 and B-5.

Table 12

MEAN GRADE-EQUIVALENT ACHIEVEMENT GAIN RATES IN COMPENSATORY READING PROGRAMS REPORTED BY INDIVIDUAL STATES, BY GRADE, 1972-73

Grade Level					
1	2	3	7	8	9
--	1.1	1.1	1.4	1.3	--
1.1	0.9	1.0	1.0	1.0	1.0
1.0	1.1	1.1	1.1	1.3	1.6
0.9	0.9	0.9	0.9	0.8	0.6
--	0.9	0.6	0.7	0.7	--
0.8	0.9	0.9	1.0	0.9	0.9
1.0	1.2	1.5	1.3	1.5	1.5
--	0.9	1.0	1.2	1.1	--
--	1.3	1.3	1.2	1.5	--
1.3	1.2	1.2	1.1	1.3	1.3
1.0	1.2	1.0	1.5	1.8	--
1.3	1.3	1.2	1.3	1.3	1.5
0.6	1.1	1.3	1.3	1.1	1.3
0.7	1.1	1.1	1.2	1.1	1.1
0.5	1.0	1.2	1.0	1.1	1.1
--	0.8	1.1	1.2	1.1	1.2
0.6	1.4	1.5	1.7	2.0	1.9
--	0.8	1.0	0.8	1.0	0.5
0.9	1.0	0.9	0.9	0.9	0.8
--	1.0	0.7	1.0	0.8	1.2
1.2	1.3	1.2	1.3	1.7	1.6
1.8	1.1	1.2	1.0	0.7	--
--	0.9	1.0	1.0	1.1	--
1.0	1.6	1.1	1.1	1.0	--
1.4	1.4	1.5	1.5	1.4	1.7
0.8	1.1	1.1	1.7	1.1	1.6

Figure 1 may help in visualizing this concept. The normal student achieves a month's improvement in standardized reading scores each month

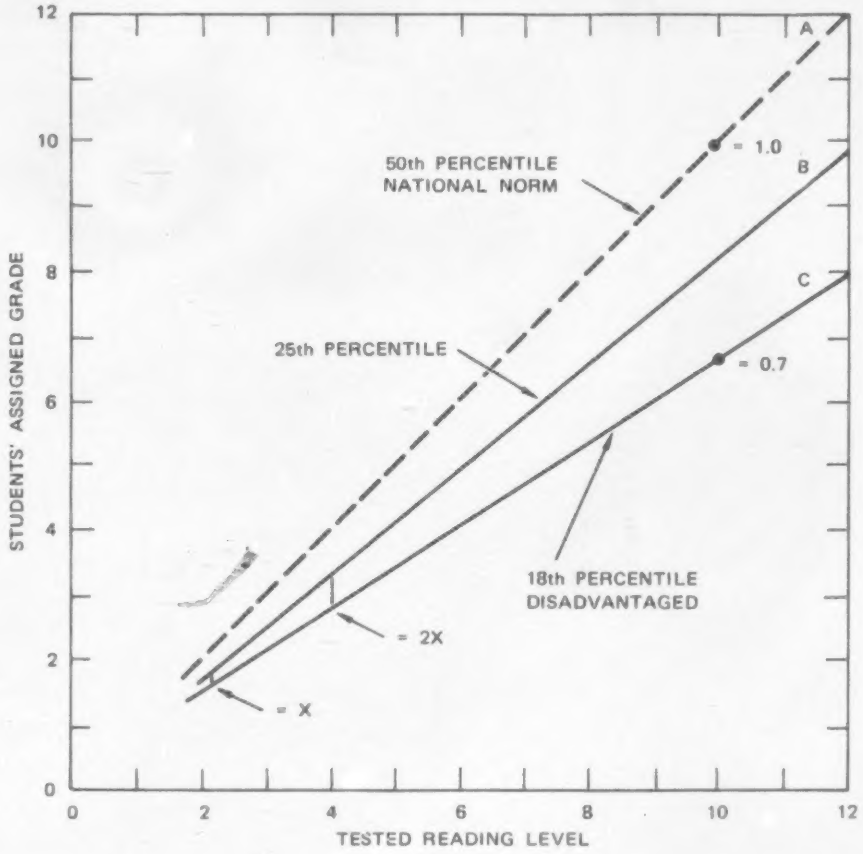

FIGURE 1 EXPECTED READING ACHIEVEMENT PATTERNS WITHOUT COMPENSATORY PROGRAMS

of his school life. Thus when the student enters grade 2, she/he will read at 2.0, at 4.0 on entering grade 4, and so on. This student falls at the midpoint or 50th percentile of the distribution of all students (line A in the figure). A student at the 25th percentile follows a different achievement path. Typically she/he will read at the 1.7 level upon entering grade 2, 3.2 in grade 4, 4.7 in grade 6, and so on. Thus her/his achievement describes a line that rises more slowly, diverging more and more from the norm (line B). The standard definition of "disadvantaged" is a pupil who achieves at a rate of 0.7 of the norm, or about the 18th percentile (line C). Thus the gap between the disadvantaged student and the 50th-percentile student will have two characteristics over time:

- The g.e. difference will increase steadily, being greater in grade 8 than in grade 2.
- The percentile difference will remain constant, that is, it will be the same in grade 8 as it was in grade 2.

From this perspective, the objective of compensatory programs is to move students from one percentile group to a higher one, reducing both the absolute and the relative differences among students. To do this, g.e. changes must be almost twice as great at grade 8 as at grade 2, for example, in order to move a student in each grade the same distance toward the norm. A preliminary check of Tables 1 through 3 suggests that while g.e. gains may be somewhat greater in intermediate programs than in primary programs, they are certainly not twice as great. However, since the issue under discussion here is not total gain but rather program effect, Tables 1 through 3 do not tell the whole story.

Total g.e. or percentile change in student performance cannot be exclusively attributed to the effects of any special program. Students would clearly have made some gain during a year of regular schooling without any special program. The critical question is how much a special program adds to this expected gain, a calculation that requires subtracting expected g.e. gain from total g.e. gain at each grade level. If the remaining gain "attributable to program effects" is as great in intermediate grades as in the primary grades, this suggests that programs have approximately equal effects at both levels.

To test this hypothesis, four separate samples of increasing quality were created from the original data base.* The difficult question is how to determine what portion of a student's total achievement is the effect of special program treatment. This issue has been widely debated, and individual researchers use quite different methodologies. One of the simplest methods is to determine some expected gain for program students in the absence of special treatment. The difference between total gain and expected gain may then be attributed to program effect. In this case we define "expected gain" as the average yearly gain for project students in prior years. Thus if the mean pretest of a group of compensatory students indicates an average previous yearly gain of 0.71, we will attribute 0.71 of the total gain between pretest and posttest to expected gain. The remainder will be attributed to program gains. These program gains are shown in Tables 13 through 15. According to this measure, the g.e. effects of compensatory education tend to increase over grades and are about twice as great at the intermediate level (grades 7 through 9) as they are at the primary level (grades 1 through 3). This is what would be expected if the programs were about equally effective. As the quality of the data increases, this relationship becomes more pronounced. These figures suggest that present programs are producing the g.e. gains required to move participating students in both grade groups approximately equal distances toward the national norms.*

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*The National Pretest sample included all states that reported a pretest score, regardless of data quality. The 12-State sample included only states that reported pretests in at least two study years, regardless of data quality. The Pretest Quality sample used only states reporting in all three years, reporting pretests in at least two years, and using a random or 50% testing sample. The Expanded Pretest Quality sample included in any year only those states reporting pretests and meeting sample quality requirements.

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*There are several methods of calculating expected gain, all of which are open to various criticisms. This method, for example, is subject to error in the following way. The expected gain calculation is assumed to represent the progress a student has made in the past without special assistance and therefore is expected to make in the future without special assistance. But what if the student has, in fact, participated in one or even several special programs in the past? If this has happened, then the expected gain would include this extra progress as well; in other words, our expectations would be too high. The result is that the "program gain" calculated at the end of the year will be inaccurately low; it would look as if the special program had been less helpful than was actually the case. Various studies to date suggest that this is probably not a serious source of error, but obviously such potential problems need to be kept in mind. Fault can be found with every standard of evaluation, and we have no wish to deny the faults of this method. However, we have tried to choose methods of calculation that at least make some common sense, despite the necessary caveats.

Table 13

MEAN GRADE-EQUIVALENT GAIN RATES IN READING SCORES ASCRIBED TO COMPENSATORY EDUCATION PROGRAMS, BY SUBSAMPLE, 1970-71*

Grade	National Pretest				12-State Sample			
	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N†	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N†
1	0.95	0.86	-0.85	6	0.96	0.82	-0.14	5
2	0.77	1.01	0.24	10	0.73	0.91	0.18	8
3	0.71	1.04	0.34	12	0.70	0.91	0.21	9
7	0.65	1.05	0.39	10	0.65	0.99	0.34	7
8	0.68	0.84	0.16	8	0.69	0.93	0.24	6
9	0.65	1.11	0.46	8	0.65	1.06	0.41	6

Grade	Quality Pretest				Expanded Quality Pretest			
	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N‡	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N‡
1	0.98	0.72	-0.26	2	0.98	0.77	-0.21	2
2	0.74	0.84	0.10	3	0.74	0.91	0.17	3
3	0.68	0.77	0.09	3	0.68	0.90	0.22	3
7	0.75	1.05	0.30	2	0.75	1.25	0.50	2
8	0.76	0.98	0.22	2	0.76	1.29	0.53	2
9	0.71	1.05	0.34	2	0.71	1.25	0.54	2

*Weighted by number of Title I eligible students in each state used.

†Number of states.

‡Number of programs.

Table 14

MEAN GRADE-EQUIVALENT GAIN RATES IN READING SCORES ASCRIBED TO COMPENSATORY EDUCATION PROGRAMS, BY SUBSAMPLE, 1971-72*

	National Pretest				12-State Sample			
Grade	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N†	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N†
1	0.99	0.90	-0.09	9	0.98	0.92	-0.07	7
2	0.72	1.03	0.31	15	-0.73	1.01	0.28	11
3	0.70	1.08	0.38	15	0.71	1.09	0.38	11
7	0.65	1.13	0.49	13	0.65	1.11	0.46	11
8	0.63	1.10	0.47	13	0.63	1.12	0.49	11
9	0.64	1.26	0.62	9	0.66	1.31	0.65	7

	Quality Pretest				Expanded Quality Pretest			
Grade	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N‡	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N‡
1	1.01	0.95	-0.06	3	1.01	0.98	-0.03	6
2	0.71	1.08	0.37	4	0.73	1.06	0.33	8
3	0.69	1.25	0.56	4	0.70	1.19	0.49	8
7	0.64	1.20	0.56	4	0.64	1.20	0.56	8
8	0.63	1.27	0.64	4	0.64	1.21	0.57	8
9	0.64	1.62	0.98	3	0.65	1.59	0.94	5

*Weighted by number of Title I eligible students in each state used.

†Number of states.

‡Number of programs.

Table 15

MEAN GRADE-EQUIVALENT GAIN RATES IN READING SCORES ASCRIBED TO COMPENSATORY EDUCATION PROGRAMS, BY SUBSAMPLE, 1972-73*

	National Pretest				12-State Sample			
Grade	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N†	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N†
1	0.90	0.98	0.08	8	0.95	0.93	-0.02	7
2	0.73	1.04	0.32	13	-0.73	1.10	0.37	10
3	0.68	1.05	0.37	13	0.68	1.10	0.42	10
7	0.64	1.11	0.48	13	0.63	1.16	0.53	10
8	0.64	1.19	0.55	12	0.64	1.29	0.65	9
9	0.61	1.32	0.71	8	0.61	1.37	0.76	6

	Quality Pretest				Expanded Quality Pretest			
Grade	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N‡	Expected Yearly Gain	Actual Gain	Gain Ascribed to Program	N‡
1	1.02	0.92	-0.10	3	0.95	0.98	0.03	6
2	0.74	1.11	0.37	4	0.73	1.10	0.37	8
3	0.69	1.14	0.45	4	0.68	1.13	0.45	8
7	0.64	1.20	0.56	4	0.64	1.16	0.52	8
8	0.63	1.29	0.66	4	0.63	1.29	0.66	7
9	0.63	1.56	0.93	3	0.64	1.50	0.86	6

*Weighted by number of Title I eligible students in each state used.

†Number of states.

‡Number of programs.

Sustained Effects

These data leave vital questions concerning the effectiveness of compensatory programs unanswered. They tell us nothing, for example, about how well students are learning to use the increasingly sophisticated and powerful cognitive abilities that they acquire as they grow up. We do not know whether they are interested in or satisfied by their own learning experiences. Most vitally, we need to know whether any programs result in a change in acquisition rate that is more than temporary, and whether such changes are more lasting when made at certain age levels. Until a careful longitudinal study is undertaken, we cannot answer this central issue in compensatory education.

Support for compensatory education rests on the assumption that greater achievement can improve the academic future of disadvantaged students and that a better academic future can improve their life chances. But in order to change students' futures, an increase in achievement from compensatory education should persist in the years following a student's participation in compensatory education programs. Therefore, evaluations of compensatory education should include measures of long-term, or sustained, achievement. At the very least, these measures should reflect the extent to which increases in achievement persist over the summer following a school-year program.

Despite their great importance, measures of sustained effects have rarely been a part of the evaluation strategy of compensatory education programs. A review of the literature of compensatory education evaluation revealed that there is ample evidence at all grade levels that programs are successful if judged by short-term effects.[2] Whether at preschool, grades K through 6, or grades 7 through 12, there is evidence of a school year impact. However, with a few exceptions there is little evidence of sustained effects at any grade level. What evidence there is of such sustained effects is most often found at the junior high school level. In particular, two studies recently conducted by the Stanford Research Institute included a nationwide search for local projects at any grade level that could verify sustained effects; these studies identified a few state-funded compensatory education programs in grades 7 through 9 that demonstrated increases in achievement even two years after participation in the program had ended. Other programs in the elementary grades which were studied by that project were unable to meet the standard of sustained effects, despite their impressive short-term gains.[3,4]

Sustained effects is a relatively new, though intuitively obvious, standard for compensatory education programs, and research on sustained effects is just beginning. However, what is known to date about both short-term and sustained effects leads us to the same conclusions. Compensatory education programs for adolescent students appear to be just as effective as programs for younger children, and may be more effective. Since we have not found a way to prevent or cure educational disadvantage in the early grades, we will have to learn to meet the special needs of disadvantaged students throughout their school years. This means providing the best and most appropriate help we can, for as long as it is needed.

Summer Residential Model

A seventh design for educational intervention programs is the residential summer program. The Oberlin College Special Opportunities Program is an example of this model, which was also used by Upward Bound with high school juniors and seniors. In the Oberlin Program, participants included students who had just completed the seventh grade.

Each summer session lasted six weeks, during which participants lived in the college dorms with college-aged student counselors. A typical daily schedule included both academic and recreational activities; the weekend schedule included field trips. The summer staff had teachers and counselors from the students' home schools. Followup activities, provided to participants for several years after the students returned to their regular schools, included reunions, counseling, and tutoring during the regular school year, newsletters that continued throughout the students' junior high and high school careers, and assistance in selecting and applying to college.

The Oberlin project differed from the other models discussed in this chapter in that it was not designed as a basic skills program for the most educationally disadvantaged students. All of its participants met specifications regarding economic hardship, but the typical pupil had a better than average academic aptitude and had marks averaging B- when he or she entered the program. About one-fifth of the participants were below average by the national norms used, and another one-fifth were below average on one or another of the scales used.

However, despite this difference the summer residential design reflects several characteristics of other designs discussed in this chapter. Staff involvement was intense and obviously required both special preparation and continuing communication among the staff members. The presence of project designers, teaching staff, and college-aged counselors necessitated a rather complex administration organization. The followup components of the program reflect the concern of its designers for providing continuity between the students' regular school experiences and their growth during the summer intervention. Finally, the cost of the design (approximately $2,000 per student total over a five-year period) is generally consistent with, though somewhat above, the funds available for other designs.

A great deal of evaluation information is available. The research design for this program included a control group of matched partners for the 195 participants. The academic effects of the program were analyzed by studying the advantage of the experimental partner over the control partner in five areas: (1) persistence in school, (2) assignment to special track, (3) achievement tests, (4) junior high grades, and (5) senior high grades. The experimental group attained significantly higher scores than the control group on each of these measures of academic performance. A sixth measure that applied to less than 5% of the students did not significantly differentiate between the two groups, although it did favor the experimental one.

The noncognitive effects are less-thoroughly documented. However, we conclude from the evaluation report that both the college residence and subsequent followup activities assisted in creating a very positive self-image and increased expectations among participants. Evaluators stressed their belief that the indisputable success of the Oberlin program resulted from the combination of summer and school-year components. They suggest that without this continuity, short-term benefits would have disappeared quickly. The success reported by the Oberlin project indicates that this model may have high potential for other districts as well.

VII PROJECT DESIGNS FOR ADOLESCENT BASIC SKILLS

Numberous compensatory education programs in operation today serve adolescents. Some are "tried and true" and others are particularly innovative. Although much of the target population remains unserved, there are many students who appear to be benefitting from programs designed to help them acquire the basic skills needed for meaningful education and employment. There is a paucity of scholarly literature on these programs, so it is essential that we learn as much as possible from existing natural laboratories. These compensatory programs for adolescents have much to offer in the way of demonstrating potential means of reaching and helping the adolescent with inadequate basic skills. It would be premature to suggest that we are in a position to evaluate the comparative effectiveness of current programs. Indeed, it may be several years before such conclusions can be drawn. It is possible, however, to begin to describe and document current attempts at compensatory education for adolescents.[1]

Relative to their elementary school project counterparts, secondary school projects are extraordinarily diverse in terms of referral procedures, instructional methods and materials, content, teacher qualifications, and other components. Yet there are some patterns within this diversity. Six paradigmatic project designs emerged from our study of projects for adolescents in a sample of seven states. We have labeled these:

(1) Support Teacher
(2) Remedial Class
(3) Content-Area
(4) Reading Department
(5) Alternative Schools
(6) Cross-Age Tutoring

The classification of subject models represents the patterns we found among the approximately 50 adolescent basic skills projects we contacted during the seven-state survey. It is probably a fair representation of the majority of existing projects funded by federal or state categorical monies. We hasten to add, however, that undoubtedly there are many projects that look very little like any of these designs, some of which may be greatly superior (or inferior). Aiding the adolescent to improve his or her basic skills is still a rare and embattled activity. Projects appear quietly and often disappear quickly, and there is a sort of underground atmosphere surrounding them. Nevertheless, we found the state of the art far more developed than we had expected, and we believe that they provide a growing base of experience and wisdom on which expanded efforts can be built.

The first two designs were found mostly in Title I funded projects, perhaps because they conform easily to Title I regulations regarding "general aid," "supplanting" and "comparability." The next three were found primarily in programs for adolescents funded through other sources. The last is included because although it has not been frequently implemented, it receives high marks in the research literature.

Program Components

To facilitate the presentation of the six models, we have organized our descriptions into four program components:

(1) Instructional design
(2) Teacher-related design
(3) Administrative considerations
(4) Child outcomes.

For each of these components there are several specific program variables or attributes that can be used to describe the several models and to differentiate between them.

Instructional Design Components

- Referral Method: One of the most important considerations is the method by which students are selected and referred for compensatory educational services. Common ones include standardized tests, diagnostic tests, and the observations of teachers.

- Skills, subject matter emphasized: The models emphasize a variety of subject matters, including such tasks as vocabulary improvement, decoding, acquisition of special vocabularies, and recognition of logical constructions.
- Materials Used: Some models prefer regular classroom texts or supplementary texts. Others rely on commercially developed curricula, while some teachers develop their own exercises and materials. A few teachers prefer to use "everyday reading," such as newspapers or paperback books.
- Method of Instruction: Methods of instruction range from rote drilling to individualized instruction and can also include more recent technologies, such as behavior modification, computer-aided exercises, and peer instruction.
- Location of Special Students: Certain designs prescribe that services be received in a building or school separate from other, average students. In other cases, compensatory students are integrated with regular classes, albeit to varying degrees.
- Remedial Instruction as Substitute or Supplement: The paradigms discovered during the course of this study vary in terms of the relation of remedial instruction to regular classroom instruction.

Teacher-Related Design Components

- Teacher Training: In some programs, little or no specialized preparation is required. Many compensatory education projects use only teachers with specialized credentials. A few place particular value on using nonspecialists from the regular staff, supplementing their abilities with in-service training.
- Organizational Structure: This variable includes the relationship of compensatory education instructors to the schools' departmental structure, to school and district administrators, and to other teachers.
- Teacher Attitudes/Behavior: Program designs differ in the effects they ultimately have on the attitudes of teachers toward the target population. To different extents, the models also develop the capacity of schools to work with adolescents who require remedial services.

Administrative Considerations

- Easy Auditing: Especially because of Title I regulations it is important to recognize the varying degrees of difficulty entailed in auditing these projects.

- Start-up Time Required: For reasons of organizational structure, inservice and preservice training needs, and physical facilities needs, among others, the several project designs considered here require varying amounts of planning and preimplementation time.

Child Outcomes

- Impact on Cognitive Skills: Although the empirical documentation of project impact on cognitive skills is scarce, we have found indications of success in some programs more than in others. This component is primarily concerned with quantitative and verbal skills.
- Impact on Noncognitive Orientations: These types of impacts are even more difficult to document than are the cognitive variety, for there are few if any valid and reliable measures available. The impacts of interest here include attitudes, values, and motivations.

This framework is the basis of the following more detailed descriptions of each project design.

Support Teacher Model

The compensatory education programs that we designate "support-teacher" programs are commonly found in rural school districts. Although students are sometimes assigned to projects according to their performances on achievement tests, they more often enter the remedial program through teacher recommendations. The English or language arts teacher identifies the students who need special help and frequently also indicates the particular skills that need extra work. Thus the subject matter of remediation in this model is often such skills as phonics, decoding, vocabulary, or word recognition.

The actual help is provided by a support teacher, usually a specialist with an extra credential or previous clinical experience who has been newly hired by the school or district with state or federal money. The specialist will visit several classes or schools in turn, working with those students whom the regular teachers have identified in each.

The location of treatment may be a section of the regular class (e.g., the side or back) or a separate room. If the special teacher wants a separate room, the room may be especially designed for that purpose. A reading lab with special materials or equipment is often used, for example. The special teachers usually rely on texts and exercises that reinforce the particular skills that the regular teacher has identified as requiring special attention. Typically, no separate period is scheduled for the remedial work. Instead, it replaces some portion of another regularly scheduled class that the student attends when the specialist is not there.

As Figure 2 indicates, the organizational structure of this design is relatively simple. The support teacher typically reports directly to a district administrator. Although in theory the support teacher also has formal ties to other school personnel, in effect she/he bypasses both the school department head and the principal and therefore does not form an organizational tie with other teachers in the project schools.

This pattern offers some obvious advantages to the small district. At least minimum services can be provided for all of the schools within a relatively limited budget. In the best circumstances, help can be provided quickly and can be focused on problems that are clearly related to the student's regular class activities. And, at least in principle, the flexible schedule of the specialist can provide time for working and talking with other teachers about students.

However, the model also appears to have a number of drawbacks. Although the specialist might have time to work with regular teachers, this did not seem to happen often. Sometimes there appeared to be friction between the English teachers and the specialist. The former felt that their pedagogical territory was being infringed on. The specialists were sometimes unhappy with the regular teachers' diagnoses but, having no organizational ties within the school, had no allies in any dispute. Principals were reported to side rather consistently with the regular staff, whom they had hired and with whom they had to work every day.

For these reasons the support-teacher model often lacks cooperation and continuity. The model changes nothing about either the school or the existing staff of teachers so as to allow them to deal more productively

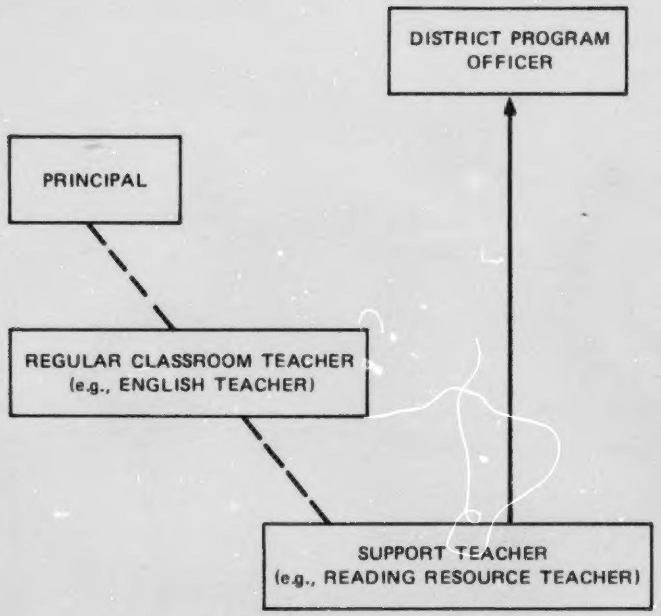
DISTRICT PROGRAM OFFICER
PRINCIPAL
REGULAR CLASSROOM TEACHER (e.g., ENGLISH TEACHER)
SUPPORT TEACHER (e.g., READING RESOURCE TEACHER)

FIGURE 2 ORGANIZATIONAL CHART: SUPPORT TEACHER MODEL

with basic skills problems. Thus when a project is discontinued, it leaves little behind.

At the same time, the staff organization of this model contributes to the relatively low status of the support teacher within the social structure of the school. Since the English teacher identifies both the students and the problems, the specialist may become a sort of highly trained classroom aide with little discretion or initiative. This can substantially reduce the ability of the support teacher to make fundamental changes in a student's overall skill levels or to solve problems that require more than a quick Band-Aid.

It is impossible to determine just how successful the support-teacher model has been in the realm of cognitive outcomes. We do know that this model is commonly found in Title I and that Title I reports of cognitive gains have been high (at least on a single-year basis). To that extent we can surmise that the support-teacher design is relatively successful despite its drawbacks.

The noncognitive aspects of student outcomes are speculative. The support-teacher model presents a potential problem for remedial students insofar as their separation from regular students is apparent to everyone and might accentuate the stigma already attached to low achievement.

Remedial Class Model

One of the most popular project designs we call the "remedial class" model. Instead of delivering remedial instruction in regular English and mathematics classes, compensatory education is provided in special remedial classes. A separate time is scheduled for remedial classes and separate teachers are provided. This provides more continuity than is possible in the support-teacher design.

Students are commonly assigned to participate on the basis of their scores on a standardized test administered to all students. They often take additional diagnostic tests, used to locate the specific skills that need special work, such as decoding, phonics, and the like, but may also include comprehension and speed. Since the remedial-class model provides both more time and more continuity, materials are less likely to be a patchwork of exercises. Commercial curricula are often adopted, supplemented by teacher-made or teacher-modified readings.

The staff of remedial classes usually consists of one or more teachers who have taken some special training and who may have a special certification. Occasionally, a remedial-class teacher is converted from the school's English department, but usually remedial teachers are newly hired and come from elementary school backgrounds.

The organizational structure of the remedial-class model is more complex than that of the teacher-support design (see Figure 3). In theory, the remedial teacher reports to the school principal, who has legal responsibility for project administration. In practice, however, teachers seem to report directly to their district program officers and do not interact with either their regular teacher peers or their principals.

Because remedial teachers work only in a single school, the remedial-class model appears to offer more organizational support for the project

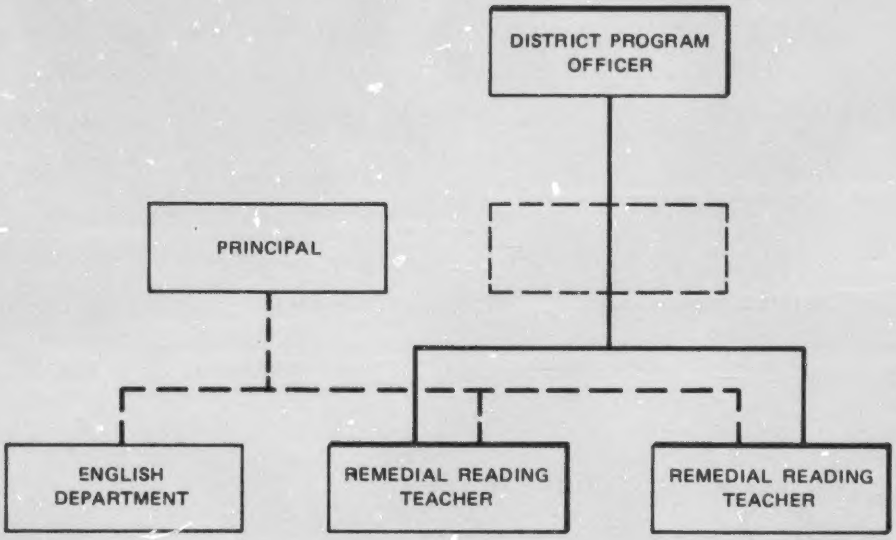

FIGURE 3 ORGANIZATIONAL CHART: REMEDIAL CLASS MODEL

staff than does the support-teacher model. When three or more teachers are assigned to the same school, they seem to develop at least an informal leadership structure, which sometimes looks like a minidepartment. Thus, remedial teachers in this model are less isolated, and frequently they have other teachers with whom they can compare notes. Sometimes all the remedial teachers will have a common free hour that is used for planning, inservice training, or mutual assistance. In this way, they can coordinate their efforts and provide students with potentially greater continuity than the support-teacher design permits. And because projects are not literally living on borrowed time, more substantial problems can be approached and more sophisticated remediation techniques can be used.

Again, it is difficult to know how much continuity results. Because additional periods of instruction are required by this model, scheduling difficulties often arise. Often remedial classes are squeezed into very small cracks in a student's schedule. If classified as a nonelective subject for participants, remedial techers have to enter into long and difficult negotiations with other departments for time and space. If scheduled as an elective, the task is even greater, since it cannot be required of students and must compete with sports and art for students' attention. Depending on what kind of a schedule the particular school is on, students may have to rearrange classes two, three or even four times a school year. Thus the potentially greater continuity of the remedial-class design is not always realized.

It is also unfortunate that remedial teachers reported little professional contact with the other teachers in the school. This lack of contact between specialists and regular teachers tends to offset somewhat the continuity that the remedial-class model might provide. Even more unfortunate, the lack of communication inhibits changes in the skills or attitudes of the regular staff. They fail to benefit from exposure to specialists who can teach them to deal with students with special needs. Indeed, project staff often reported that other teachers in the school seemed anxious to avoid learning from the specialists. Since there was someone else to whom the problem belonged, they could now relieve themselves of any responsibility for coping with it.

A second common difficulty for projects of the remedial-class design is their lack of relevance to the remainder of the curriculum. In theory, improved basic skills should transfer naturally and broadly to the performance of other academic tasks. In practice, however, a student must often struggle on in many classes for a long time before a general improvement in decoding or reading speed can be turned into a better way of coping with English, Social Studies, and Biology. The particular skills that are usually stressed in projects using the remedial-class model are often even further removed from any direct application out of school. Reading a newspaper, taking a subway, or purchasing a sandwich is not very obviously related to the exercises that are often done in remedial reading periods, and the adolescent student is quite able to recognize this.

The remedial-class design is exceptionally easy to audit against supplanting and concentration of funds, and this probably accounts for its enormous popularity within Title I. The good reports of Title I state programs over the years suggest that, on a single-year measure of reading and math skills, this design is quite effective. Yet we have serious reservations about whether it produces help that extends beyond the remedial classroom or beyond the end of the school year.

The structure of the model is such, however, that student stigma appears less likely than in some other designs, principally because students do not need to get up in the middle of a regular class to attend remedial classes.

Content Area Model

Content-area projects represent an integration of remedial and regular services to the project pupils. In this model, basic skills are important not as ends in themselves but because they are needed in order to perform other activities.

Students usually are assigned to content-area projects based on their scores on standardized tests, as in the previous model, but content-area projects will often consider scores on more than one area of a standardized test--say both reading and social science--and will also consider teacher recommendations or student records. The subjects emphasized here are the skills that are basic to adequate performance of school tasks. These tasks are not confined to English, but include biology, history, math, and so on. Thus the skills at stake are not so much decoding and phonics as comprehension, higher vocabulary, reference and study skills, and a category often referred to as "critical" or "logical" thinking. Materials are drawn from a wide variety of sources. A variety of commercial or teacher-made materials may be used along with regular classroom texts, and teachers may also use simplified texts on the same subjects, newspapers, magazines, and paperback books.

Similarly, instruction takes place in many places rather than a single room. Most projects drawn on this model conduct reading classes either in addition to or as part of the regular English classes. Instruction continues, however, in other courses, such as math and social studies: the teachers of these classes give project students special attention and help with the basic skills as they are required in that particular course. They also provide additional materials when necessary.

Some of the most important differences between content-area projects and the two previous models have to do with teachers. The remedial staff, for instance, usually consists of a mixture of specialists and teachers without special preservice training or certification. The latter are drawn from the various departments of preexisting school staff and usually receive considerable inservice training from the specialists on the project team. They teach heterogeneous classes of project and nonproject students in the subject of their specialization.

Figure 4 illustrates the organizational structure of the content-area model. Most significant here is the creation of an organization of project staff that cuts across the regular departmental structure of the secondary school. Remedial teachers are members of departments, but at the same time they are responsible to their project director. This eases communication and cooperation between regular and project teachers and therefore contributes to increasing the continuity of the project for both staff and students. The dual loyalty of project teachers can create problems, however. For example, teachers may face conflicting demands on their time from the project director and the department head. Obviously there are new skills to be learned, as well, and there is rarely any extra pay for the work involved.

Because the project teachers are tightly organized, they seem to have effective bargaining power in terms of school level policies and practices. There are also some advantages to drawing project staff from among regular departments. Except for the competing-demands conflict cited above, there is little conflict between project and department interests. The isolation of project staff apparent in the previous models is also minimized, for most of the teachers are accustomed to meeting with each other. Regular teachers seemed to benefit in terms of a broadened understanding of compensatory education. The practices of the project teachers seemed to affect the nonproject teachers and thus improved their awareness of basic skills problems in nonproject classrooms.

The relative complexity of the content-area model is most obvious in its administrative characteristics. The size and comparative vitality

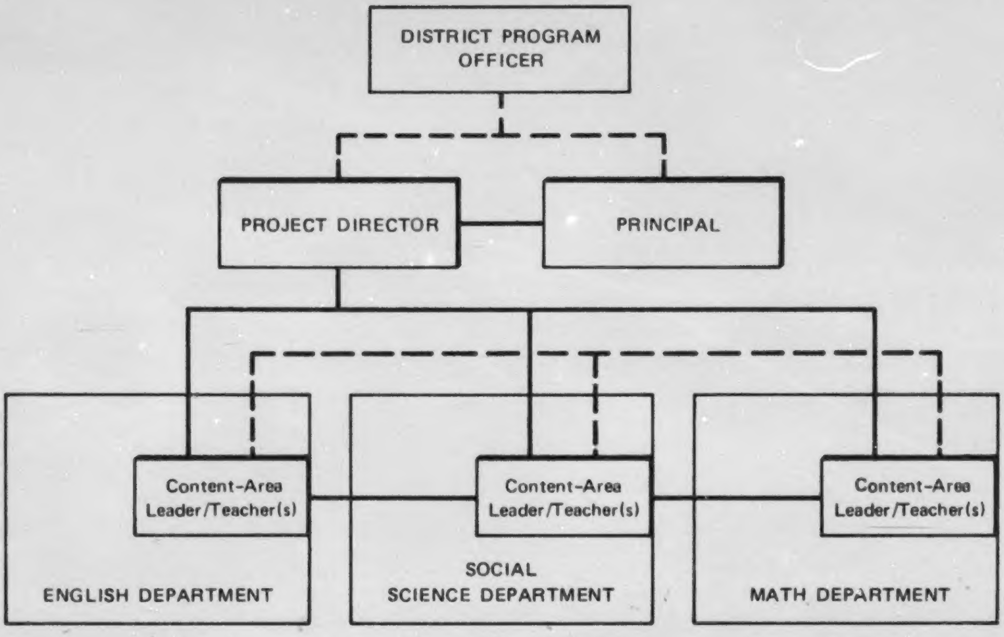
DISTRICT PROGRAM OFFICER
PROJECT DIRECTOR
PRINCIPAL
Content-Area Leader/Teacher(s)
Content-Area Leader/Teacher(s)
Content-Area Leader/Teacher(s)
ENGLISH DEPARTMENT
SOCIAL SCIENCE DEPARTMENT
MATH DEPARTMENT

FIGURE 4 ORGANIZATIONAL CHART: CONTENT AREA MODEL

of the project staff tends to shift the administrative emphasis from district to school level, and thus strong and determined leadership is needed. This may come from the project director or from the principal and ideally from both. We typically found school principals to be very active administrators in content-area projects. These projects also take relatively longer to get started. Substantial planning and inservice training is needed before implementation can be started, and this is often difficult to sell to a school or district that feels compelled to achieve an instant solution.

The partial or complete integration of remedial services with the regular curriculum makes the construction of an audit trail a tedious and exacting task. Though not impossible, such audit trails add greatly to the administrative burden and do much to explain why projects of this design are far more common in state-funded programs than in Title I. In addition, there is some potential in the content and design for diluting the level of services that project students actually receive. For example, if there is no additional special instruction in reading or math, and if aides are used in the content-area classes, the net effect for project students could be to replace experienced teachers' time and attention by that of less-qualified aides.

The greatest source of evaluation information on this model is the California Demonstration Program, which used such projects almost exclusively. This program reports high and sustained gains when such a design is used for longitudinal treatment of junior high students. Its noncognitive aspects are less thoroughly known. It seems to offer both more teaching and greater continuity for the students. It also appears that because low-achieving students were assigned to regular classes and the regular schedule, hostility to the project was greatly reduced. Students were also said to be favorably inclined toward these projects because it was possible to see the ways in which basic skills work could actually help them in school. On the other hand, there are obviously cases in which this model can lead to more rather than less stigma; for the student who is very severely behind, a temporary total relief from the regular curriculum may be more useful and appropriate.

Reading Department Model

The most highly institutionalized remedial instruction is that of the reading department. In this model, all students in the school take some sort of reading instruction, varying from letter recognition, through functional literacy, to speed and pleasure reading. (This arrangement of instruction over a broad range of abilities is also frequently referred to as "developmental" reading.) Thus any remedial instruction received is a supplement to regular English or language arts instruction. Typically, a student is assigned to classes according to a score on a standardized achievement test, supplemented by one or more diagnostic tests. Teacher recommendations play very little part in the assignment procedure. Indeed, readers at the highest levels are often allowed to choose from among two or more specialties.

Materials and methods vary with the types and levels of reading. The use of commercial curricula, computer-aided instruction, and highly specialized laboratory equipment is common, as are teacher-made materials.

Class size tends to decrease somewhat with the reading level of the students enrolled.

In schools with reading departments, reading is a subject completely separate from English or language arts, and every student takes both. It follows that a separate staff of reading teachers is needed, and these teachers form a department separate from and equal to the other departments of the school. The staff of a reading department is often as diverse as the levels of reading they teach: several may have special certificates in reading or learning disabilities, one or more may have advanced degrees in literature, and there appears to be a slight preference for teachers with secondary rather than elementary school experience. All the reading teachers will usually participate in some inservice activities planned by the department head, but in general, these inservice activities are minimal.

In this model, all reading teachers report to the head of the reading department, who reports in turn to the principal of the school. This arrangement is shown in Figure 5. Typically the department head will also report to a district supervisor as well, if any categorical state or federal monies are used by the department. In general, however, ties to the district seem to be more formal than functional (the inverse of the support-teacher model).

The creation and funding of a reading department often means decreased funding for other school activities, and this can cause considerable initial resentment by other groups in the school. This resentment can exacerbate another difficulty of the department model, namely the potential isolation of reading activities and the reading staff from the rest of the school. When reading is defined as a separate activity, the staff may tend to forget that students learn to read in order to do other things, such as improving their classroom performances or coping more effectively with the nonschool society.

These potential liabilities must be balanced against the potential benefits of the departmental organization. As a department, the reading teachers are better able to hold their own against the resentment of

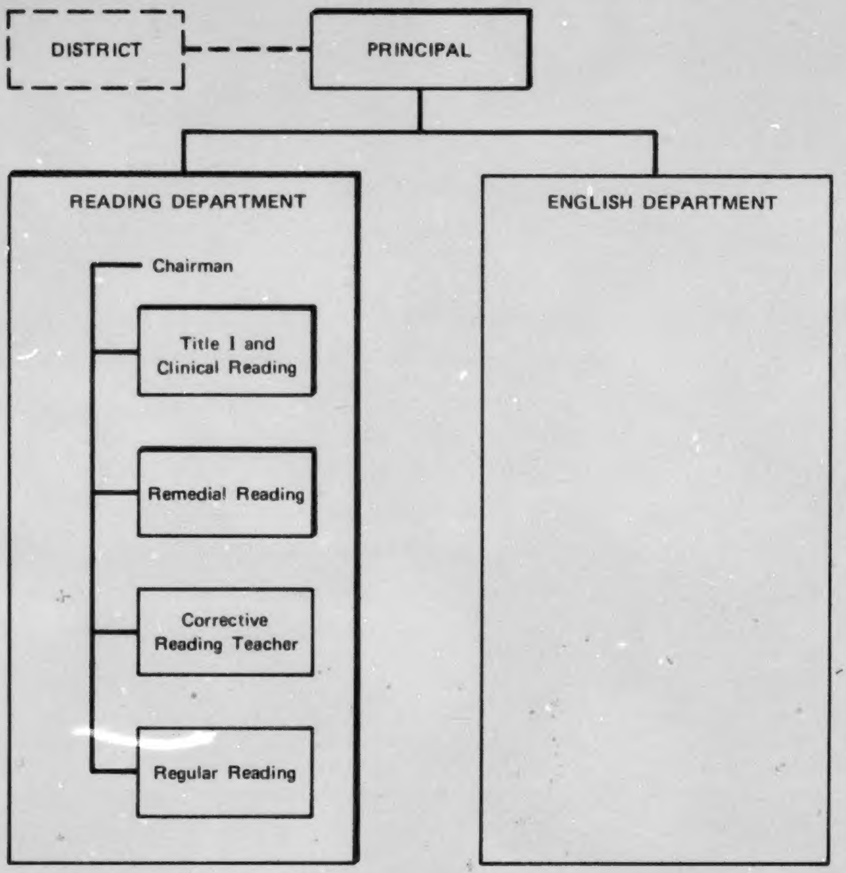

FIGURE 5 ORGANIZATIONAL CHART: READING DEPARTMENT MODEL

other departments whose budgets have been cut. Because the department has more permanence than a project does, reading teachers have a more legitimate collegial relationship with other school faculty under this arrangement. Although there is only limited communication between the reading and other departments, intradepartmental ties are active and useful. Finally, individual reading teachers have other specialists with whom to share their concerns and to whom they could go for assistance.

The reading department paradigm is most effective in large schools, and its administrative characteristics reflect this setting. Because of the clear separation of reading from other activities and of remedial students from others, projects of this type are relatively easy to audit.* But because of the rearrangement of priorities within the school, the principal and department chairperson must be strong promoters of this strategy and harmonizing influences within the school to counter the occasional ill feelings of other departments mentioned above. To the extent that non-Title I funds are used, a reading department is far less subject to the vagaries of categorical funding levels than are other project designs. Administrators at all levels prefer this, and staff members are also in favor of the organizational stability that this model offers.

The impact of these projects on child outcomes can only be surmised. The staff of reading departments were unusually enthusiastic and claim a wide variety of benefits for this type of model. Coverage of reading difficulties was said to be thorough, and there were no problems with borderline students who might slip in and out of other models as participation criteria and funding fluctuate. The format allowed for considerable continuity over years for individual students as well as for substantial flexibility in terms of the skills that could be addressed.

On the noncognitive level as well, this model appears potentially strong. Students at the low end of the achievement range were said to be cooperative because, since everyone took reading and only the level of the course differed, distinctions amont the students were no greater than for any other subject.

Alternative School Model

The fifth model that we encountered we have termed the alternative-school model. It departs substantially from the emphasis on basic academic skills that predominated in the preceding four models, but is included here because, in practice, students with severe basic academic skills problems almost invariably made up the bulk of the students who attended these schools. While alternative schools do offer special assistance in basic skills, they place much greater emphasis on counseling, vocational training, and off-campus work experience than does the regular school. The objectives of alternative schools often include developing among the students a sense of responsibility, an understanding of the need for certain basic skills in the work place, and an opportunity to decide between personal goals of occupational training or further schooling.

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*Note that ease of auditing does not necessarily imply conformity to the regulations of specific funding sources. For instance, some, but not all, types of reading departments could incur violations of ESEA Title I supplanting regulations.

An important premise of the alternative school design is that the students enrolled there are unable to relate successfully to the traditional school structure. Therefore students are placed in the alternative school based on a variety of behavioral factors, such as "inappropriate" classroom behavior, apathy, and "potential for dropping out." In some cases, these criteria are supplemented only casually by such assessments as standardized tests. In most cases, however, students are given some measure of choice in whether they attend the regular school, the alternative school, or no school at all.

Teachers in alternative schools come from a wide variety of backgrounds, and far less importance is attached to special or even regular credentialing in this model than in others. "The ability to work with and understand nontypical students" was repeatedly said to be the most important teacher characteristic influencing hiring. Staff members usually are not arranged into traditional departments, but often report directly to the principal of the alternative school.

Successful alternative school designs can provide a useful option for students, and their flexible arrangement can sometimes deliver both basic skills and vocational training in a form that is more palatable and more useful to low-achieving students. The danger of alternative schools lies in the possibility that they can become dumping grounds for any student who is difficult to deal with or a holding tank for behavioral problems. The attitude of the staffs of both the regular and the alternative schools will determine whether the alternative school is used as a way to escape change and avoid dealing with difficult problems or as a way to reach and teach those students who would otherwise discontinue their education.

Cross-Age Tutoring

A sixth compensatory education program for adolescents is cross-age tutoring. We did not encounter it in our seven-state study, but it is a program that is advocated by many educational theorists, and that appears to have considerable potential for improving both the cognitive skills and the noncognitive orientations of tutors as well as tutees.

For the purposes of this review, cross-age tutoring may be thought of as the use of adolescents as tutors to students younger than themselves, both younger adolescents and elementary school students.

Originally, cross-age tutoring projects used nonremedial adolescent tutors to work with low-achieving elementary students. More recently, however, emphasis has shifted to favor a situation in which a low-achieving adolescent student improves both his own basic skills and those of his young tutee. Fitz-Gibbon and Silberman argue that "being a tutor is highly motivating, especially to students disenchanted with regular classrooms. The process of tutoring enables tutors to learn work to mastery--learning by teaching--and provides individualized instruction for the elementary school student. Both groups of students will show cognitive gains from an activity--tutoring--that both groups enjoy."[2]

Teachers usually assign both tutors and tutees, and provide a kind of inservice training to prepare the older students for their tasks. To teach the basic skills, tutors employ a wide variety of materials, though inadequate budgets sometimes prohibit the use of current or specially devised materials. According to Bloom, it is essential to select materials that insure maximum participation and appropriate and valued reinforcement.[3] Over the last decade, publishers have constructed numerous diagnostic, prescriptive, and individualized materials, including multimedia materials and kits that can be used in this model.

Cross-age tutoring has been used as both a substitute and an add-on educational activity. Where it is a substitute, it becomes an integral part of the school day and a regular method of instruction. Sometimes, however, it is an optional activity or a way of providing remedial services on an ad hoc basis.

Cross-age tutoring projects are organized in a variety of ways. In some, remedial students receive initial instruction from their teachers and then take on the role of tutors under their supervision. In others, they report directly to the elementary school early each day and spend the entire morning there. Part of the morning is spent learning to tutor and the remainder is devoted to tutoring. The learning-teaching school is another variation in which an entire school (a small one of, say, 150 students) is prepared to tutor. The organizational possibilities are endless and are accordingly not treated in any detail here.

The continuity between a student's compensatory education and regular classes depends almost entirely on the degree of cooperation among teachers, and cross-age tutoring programs are too novel to have provided any evidence that this has occurred. Nor are there data on the extent to which regular teachers have been influenced by such programs. It has been predicted, however, that the tutees' teachers may either consciously or unwittingly interfere with the tutoring program; although they pay lip service to the benefits of the program, they may dislike relinquishing their responsibility to other students. In any event, it could prove difficult to recast teachers into the role of "manager of classroom learning" from the role of "possessors and dispensers of knowledge."

In theory, once a cross-age tutoring program is initiated, it should develop a momentum of its own that does not require a great deal of supervision by the school principal. Although the details of such a model are potentially complex, budgetary and scheduling considerations, setting up a library of materials, and arranging tutors' inservice time can all be handled by the project director. Considerable start-up time is required, due to the need for scheduling changes and securing teacher cooperation. Besides scheduling time for pre- and inservice training, class and period scheduling must be adjusted to allow teachers to coordinate instructional efforts. However, compared to some other models, total start-up time is relatively short.

There have only been a few evaluations of cross-age tutoring programs using adolescents requiring compensatory education, but the results have been very positive. For example, an evaluation of a cross-age tutoring model in the School Neighborhood Youth Corps found benefits for both tutors and tutees and in both cognitive and noncognitive domains.[4] Tutors were better able to improve their language skills than controls were: they attended school more regularly than controls, and they increased in self-esteem. Tutees made gains in reading interest and picture vocabulary, though not in reading achievement. Those who had been performing below grade level in conceptual skills demonstrated gains; they seemed to increase their self-confidence and their perceptions of their classroom behavior.[5]

VIII FINDINGS AND RECOMMENDATIONS FOR RELATING PROJECT DESIGN TO POLICY

The experience of existing remedial projects is of great importance to the strategies that we propose in this report. The list of findings below summarizes the aspects of projects that most influenced our subsequent proposals.

Findings

(1) Projects in the middle and upper grades, while all having the common goal of improving basic skills, are extremely varied in the specific objectives that they define and pursue, and sometimes encompass an exceedingly broad range of objectives.

In the lower grades, the obvious objective of compensatory education projects is to teach the most fundamental of reading skills (e.g., decoding) and number skills (e.g., counting). The use of reading and calculation skills is confined, by and large, to small and specific portions of the school day, and to the extent that reading skills are used in more than one portion of the day, only a relatively limited vocabulary is required.

A very different situation obtains in upper grade compensatory education projects. Often such projects must deal with the same needs for decoding and counting that mark the elementary grade projects. In addition, they must deal with the now overwhelming need for skills of "comprehension," and a much larger vocabulary. Also, these projects must provide for the needs of the older student, who faces a variety of subjects that may have technical vocabularies and different characteristic syntaxes as well. Even beyond this, compensatory projects in the upper grades may assist students to function as literate members of the adult society, performing the many tasks outside the school that presuppose mastery of basic reading and calculation skills.

> (2) Projects for the middle and upper grades are also more varied in design and organization than are projects for the lower grades.*

Our study of more than 50 projects in seven states suggests that this enormous variation clusters into the basic types described in the previous chapter. Many other designs are discussed in the literature.

Adolescents need to use basic skills in one way or another throughout the school day. This suggests that the remediation of basic skills may be attached to many different parts of the student's curriculum, or even be integrated into the entire curriculum. The result is that often the boundaries of compensatory projects are not very obvious, particularly when compared to the familiar models of the elementary grades. We believe that there are very good reasons for this tendency to integrate--reasons grounded in pedagogy, psychology, organization, and cognition itself. Nevertheless, those who devise and support compensatory education for older students need to be prepared to deal with something that is not always easy to describe.

> (3) By and large, the projects with organizationally more complex designs stand a better chance of surviving and providing effective services to students. This is not because there is anything innately good about complexity, but because with this complexity come other project attributes that may be helpful.

For example, complex organizations usually have larger staffs, and as several faculty become involved, they tend to act as public relations agents for the project with the remainder of the faculty. Beyond this, we conclude informally that complex designs gain something by sheer numbers. Those projects with three or more staff members seemed somehow more able to hold the project together over time and to fight for its needed resources. Morale was higher and funding more stable despite the higher total costs. This suggests that there may be critical mass in staffing.

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*This is not surprising, given that intermediate and secondary schools as a whole tend to be more complex and more varied than elementary schools.

Organizationally complex models also seem to receive more support from the students who participate. Again, this is apparently a coincidence that arises from the fact that these designs do less to set the low-achieving student apart from other students. The result may be less stigma and less embarrassment to the students, and thus less hostility to the projects.

Finally, compensatory education projects in the middle and upper grades definitely need effective leadership. Usually, this must be developed from within. This seems far easier to do when the project itself has some internal staff structure than when there is no such structure, or perhaps only a single staff member.

> (4) With only a few exceptions, projects based on pull-out or resource-teacher designs seem to have less to offer the adolescent student and his/her teacher than do other models.

A number of circumstances seem to contribute to this phenomenon. First, the pull-out or resource-teacher designs make the clearest identification of the remedial student to her or his peers. Adolescent students are embarrassed and annoyed by this and are predictably uncooperative. But the teachers don't have it much easier. The pull-out approach provides no network of professional support for the remedial teacher, who must think and work through each new problem alone. Beyond this, the design creates difficult ambiguities over the respective statuses, roles and responsibilities of the remedial teacher and the regular classroom teacher. The designation of a single remedial teacher also allows all the other teachers in the school to disclaim responsibility for either basic skills problems or their solutions. This in turn means that very few teachers recognize that they have a stake in the compensatory project and that no "critical mass" is ever reached. Such circumstances tend to leave projects quite vulnerable to budgetary attacks, and only moderately successful should they survive at all.

Similarly, the school principal seems to be only rarely involved in projects of pull-out design. Resource or special teachers generally build alliances with district personnel and organizations, leaving themselves without the principals as valuable allies in the fight for budget recognition.

There may be a few exceptions to this general finding. The first is that of very small districts. When both a district and its schools are small, the visiting resource teacher or the pull-out class may seem to be the only answer. Perhaps, however, this is simply another way of saying that this is the only feasible answer under present levels of funding and regulations about the training of teachers, use of special materials, and so on.

A second exception may be the conjunction of a resource teacher with a cross-age tutoring design. The cross-age tutoring design seems promising for districts and schools of all sizes.

(5) Projects for students in the middle and upper grades seem to use all kinds of standardized tests more frequently than do projects in the elementary grades.

In some ways it is a great deal more sensible to use standardized tests of any kind on older students than on younger students. Testing younger children has proven notoriously inaccurate, and teachers must rely on tests as "predictors" of a student's later performance, or an assessment of general I.Q. The intellectual capacities of older students are much more specialized simply because of their stage of cognitive development. This means that the information you get from testing older students can be much more accurate and far more specific.

This argument cuts both ways, however. In fact, the normed tests that are most commonly used for evaluation give very little concrete information about the specific strengths and weaknesses of individual students. This means that they must be supplemented by batteries of diagnostic tests that can be linked to treatments for the student. And here is where the confusion enters. Teachers in the upper grades seem to have an extraordinary faith in diagnostic tests, which is probably unjustified. These tests are neither so reliable nor so helpful as their publicity suggests, and the remedial teacher can spend a great deal of time and money trying to find the "right" answer by giving one more test.

We also suspect from our conversations with teachers and evaluators that the frequent testing may be a function of the inexperience and hesitancy of secondary teachers in teaching basic skills. For many teachers in nonelementary projects, teaching basic skills is an entirely new task and one for which they have been very poorly prepared. Insecurity makes the pseudo-objectivity of tests very comforting.

(6) One of the major issues in the design of good compensatory education projects at the junior and senior high grades is the struggle to achieve continuity.

Both research and experience are demonstrating beyond a doubt that the "one-shot" intervention is of very little use. Nevertheless, many local projects find it extremely difficult to provide assistance that has continuity over more than one year, and many cannot even manage continuity through a given school year. We think there are several reasons for this.

First, funding is terribly unpredictable for projects in the nonelementary grades. With a decreasing proportion of Title I funds being spent in these grades each year, local projects always live with the prospect of imminent demise. Under such circumstances, projects must be designed within the financial and conceptual limits of a one-year treatment. Therefore, projects are driven toward short-term propping up rather than the thorough reform of basic skills.

Second, longitudinal continuity is hampered by the inability of marginally funded projects to treat the same students year after year. Projects are instructed each year to "pick up the bottom," which means that those "at the top" must be moved out of the project, whether or not those students are now performing at grade level, or have had a chance to stabilize the gains that have been made. A project with only enough money to serve a few students in any school is unlikely to be able to stabilize the gains of those students who do benefit from the first year of participation.

A third and similar impetus toward single-year treatment is current evaluation methods and criteria. Since neither state nor federal evaluations mandate longitudinal assessment of participating students, the project concerned for its own survival will attempt each year to show the highest possible gains by taking a new group of participants each year. This makes the short-term record better, but does next to nothing for either the students or the school system in the long run.

Fourth, many compensatory projects at the secondary level must appear in the curriculum as an "elective," which replaces a study hall or some other "unimportant" subject. This means that every time a student's class schedule is changed, those students who do not have an elective at the period the project class is run are out of the project. In many schools, students change schedules as often as four times a year. Under such circumstances, projects can provide very little help.

Some, but not all, of these difficulties are solved by the careful choice of project design. Others must depend on changes in the regulations of federal programs, or on increases in state and local financial commitment. None is insoluble if the political will exists to help the low-achieving adolescent.

(7) Staff for junior high school projects need not be "reading specialists" with substantial and specific preservice training or special certificates. However, projects have a high need for inservice training.

Many projects for junior and senior high grades do use specially trained reading experts. In particular, the staff for smaller projects, often with pull-out designs, are more likely to be drawn from among applicants with special training in primary grade reading. Projects with remedial class designs are more likely to hire reading specialists with secondary certificates, when these can be found.

The most common method of obtaining staff, however, is through retraining or inservice training given to teachers who are already members of the school faculty. This method is almost always the principal staffing technique for content-area, comprehensive, and alternative-school designs. Project directors reported that regular secondary faculty, whether English teachers or teachers of other subjects, made effective teachers of compensatory basic skills when the project had the time and the money to construct adequate inservice programs, and when the teachers were part of a supportive project organization. Since they already have considerable experience in working with students in this age group, discipline and motivation problems are reduced.

Another type of inservice training useful to secondary level projects is that which makes the nonproject teachers aware of and enthusiastic about the project. Such inservice training includes the difficult process of building and changing organizational structures both within the project and within the school. Often this extended inservice must be funded by nonfederal monies, a procedure that complicates the task. Nevertheless, our interviews suggest very strongly that the time and trouble is a worthwhile investment.

(8) Projects require and benefit from more planning time than is usually needed for elementary grade projects.

The reasons for extended planning are very similar to those discussed above for extended inservice training, and indeed the two processes are often thought of as one. Because secondary level projects typically do not import specialists, school staff need to think through for themselves a great deal of the detail of project design. Since local curricula and requirements vary much more among secondary schools, commercial packages can be used less frequently, necessitating some time for the development of curriculum materials. Scheduling both the faculty and the students is a complicated process, particularly during the first year, but it is a task that is very important to the smooth operation of the project. Finally, selecting, defining, and mixing project objectives is a lengthier process in the secondary grades since there is a considerably larger range of objectives from which to choose.

Recommendations

These findings suggest some very specific recommendations regarding the construction of alternative strategies for serving low-achieving adolescents and their schools.

(1) Secondary schools should not have to compete with elementary schools for funds. Specific monies should be set aside for use in middle- and upper-grade level projects and should be made as secure as possible.

(2) The national program should encourage the use of instruments for student assessment and project evaluation that provide concrete, unambiguous standards and that are understandable and meaningful to both the project participants and the citizenry at large.

(3) The development of local designs for the longitudinal treatment and assessment of students should be strongly encouraged. Regulations that encourage one-year projects only should be eliminated.

(4) National program regulations should not differentially favor those designs or curricula that isolate Title I students from their classmates, or that necessarily isolate project staff from the regular school faculty. Instead, they should encourage diversity of design as much as possible.

(5) Time and money should be set aside for preimplementation planning of local projects, and such planning should include school faculty and project staff whenever possible.

(6) National regulations should allow specifically for the retraining of existing secondary teaching personnel at project schools. Inservice training must be recognized and provided for as a continuing project expense and should strive to build ties between project staff and regular school faculty.

These recommendations describe an idealized policy, and since they contradict each other to a certain extent it is unlikely that any real program could implement all of them at once. Nevertheless, they are useful for indicating the directions in which programs need to move, even if more progress can be made towards some than towards others. Each of the four proposed strategies that follow in Section 3 is built on one or more of these recommendations.

Section 3

SPECIFIC PROPOSALS FOR ALTERNATIVE FEDERAL STRATEGIES

IX INTRODUCTION TO STRUCTURAL POLICY CHOICES IN FEDERAL EDUCATION PROGRAMS

In the preceeding chapters, we have tried to persuade the reader that there is reason and need to extend compensatory education support to include far more nonelementary students. If we have been successful the reader is now ready to consider concrete proposals for obtaining assistance for these students and their schools.

The purpose of this chapter is to help the lay reader understand:

- The most common strategies of federal assistance to education.
- The technical and political factors that usually influence the choice of one strategy rather than another.
- Some of the specific considerations that may indicate choice of one strategy for assisting adolescents rather than another.

Types of Federal Assistance

Large-scale support programs are generally organized in one of three ways. Some are funded by grants matched by states or LEAs. This strategy, referred to as "matching grants," assumes that the responsibility and risk involved in the enterprise is properly shared by the several agencies involved. Those states or districts that choose to participate--and contribute their own dollars--are thought most willing and able to get positive results.

More typically, federal support money is distributed directly to local agencies (or to them through intermediate state agencies) on the basis of some federally set criterion, such as the number of "target population" individuals in their jurisdictions. These are usually referred to as "categorical formula programs." Local agencies, which are not asked to contribute resources of their own, then provide services to this target population. This strategy assumes that effective practices are generally known and are fairly uniform in cost and organization. Regulations and guidelines are used to direct the local operations of the program.

Categorical programs are most appropriate when both the problems and effective solutions are widely agreed upon, when the target group can be simply defined, and when solutions do not require radical departures from the current practices of local agencies. They are also most appropriate to a philosophy of government that values central control, coordination, or direction.

A third method of direct support distributes federal money to state agencies and does not assume that states will or should choose the same means to effect the particular educational goal at stake. Commonly referred to as "bloc grants," this type of assistance results in an array of state programs over which a minimum of federal regulation is exercised. Bloc grants are most appropriate when the form or severity of a problem (and therefore its solution) varies greatly from state to state, when definition of the target group is subject to change, or when substantial local innovation is required. This is a strategy associated with a philosophy of government that values a minimum of federal control or decision making.

Another common strategy of federal assistance is through the funding of applied research and demonstration programs. Applied research conducts studies at real school sites rather than in the laboratories. It includes various practical experiments with teaching methods, organization, or materials and the comparative evaluation of such experiments. The end product of applied research should be concrete suggestions about what or what not to do in other schools or classrooms.

Applied research is sometimes a component of "demonstration projects," in which the federal government provides financial aid and technical assistance to LEAs who will agree to try innovative practices that would otherwise be avoided as too difficult or expensive. The hope is that these projects will demonstrate their success to observers and will subsequently be adopted by other states and school districts. Since the practices will by then have been "proven," new users should be more willing to implement them with their own or other special resources.

Of course, the several federal roles listed above can be combined and varied in a number of patterns, adding to, replacing, or modifying preexisting federal efforts for other purposes.

Factors that Influence Choice

Thus the decision that some federal assistance is needed still leaves the problem of choosing or improvising the form that the assistance should take. Assuming that the federal government is to play some role in improving basic skills for adolescents, the choice among these possible strategies depends upon a number of factors, both technical and political. The technical questions include:

- Can we define the basic skills about which we are concerned?
- How accurately can we define the target group of adolescents who lack basic skills?
- How much change is needed--a little or a lot?
- How much do we know about how to help these adolescents--do we need more research or can we act directly?

The pertinent political questions include:

- Is tight central control needed to insure that federal money is used for the purposes intended?
- How much money and effort are we willing to commit to such a venture?
- Will attention to educationally disadvantaged adolescents add to or detract from attention to other target groups (e.g., early childhood, bilingual)?

In an ideal situation, there would be a concise, incontestable answer to each of these questions and to a myriad of others. In reality there are few, if any, clear answers. Often, what you "know" depends on what you believe, not vice versa.

Technical Issues

For example, with respect to basic skills for adolescents, there is widespread agreement that students in the middle and upper grades are not learning what society has expected them to learn and need to devote more attention to basic skills. Just what "basic skills" encompasses, however, is more problematic. For those people who are exclusively concerned with reading, basic skills might be equated with being able to read a simple English sentence out loud; "basic skills" is taken to represent decoding, simple vocabulary, phonetic spelling, and the like. Other people are especially concerned that students be able to do something useful with their skills and thus be prepared to participate in adult society. The hope is that students can at least perform such routine tasks as filling out forms, purchasing items in a grocery store, or reading a map or newspaper. Still others feel that "basic skills" includes the ability to progress beyond this very simple stage, to engage in logical thinking, to have some proficiency in writing, to acquire minimal substantive knowledge. Finally, there is manifest concern about those abilities commonly measured on standardized tests--comprehension of textual material, intermediate vocabulary, and the like. In short, everyone can define a basic skills problem, but these definitions vary greatly. If a definition can be found that includes most of these points of view, then a categorical support program will be feasible. If not, then a bloc grant or matching grant program will be more feasible, since either of these methods provides more room for local differences in the instructional content given to participating students.

Similarly, while there is agreement that the target population is composed of adolescents and intermediate and secondary grade students, there is again some disagreement about which adolescents should be selected.

As Chapter III notes, Title I was born in a political climate dominated by concern for the poor. Policy makers were convinced that poverty was the cause of educational failure and that educational success was the path out of the cycle of poverty. Present compensatory education policy is grounded in this identification of poverty with low achievement. It is true that disproportionately high proportions of poor youngsters do relatively badly on tests, in school, and subsequently as income earners. From this perspective, the target group of adolescents needing basic skills improvement is low-achieving students from low-income families and from school districts that enroll substantial numbers of such students.

The issue may be viewed differently. Increasing numbers of low-achieving students come from middle- and upper-income families and districts. If the real source of concern is low achievement, then defining need in terms of family or school-district poverty is inaccurate and inadequate. The target group is really all low-achieving adolescents; a direct measurement of achievement is needed, rather than the imperfect proxy of poverty. As with the previous issue, there are perhaps too many answers to this technical question rather than too few. If a categorical support program is desired, a choice will have to be made between poverty or achievement as the target group definition. If policy makers are unwilling to choose, their recourse is to design a program of bloc grants or matching grants.

A third technical issue concerns how much change the school district must make if the problem is to be seriously addressed: Is it small adjustments or thoroughgoing reform that is called for? If the latter, can the federal government bring about such reform? With respect to adolescent basic skills questions, the amount of institutional change has to be reckoned an unknown. Small changes--new educational materials, tinkering with school schedules, and individual student curricula--may be very useful and could be accomplished in categorical programs. However, the decline in basic skills competency has been widespread and has occurred over a long period of time. This suggests that quite radical changes may also be needed, indicating the usefulness of applied research or flexible state-oriented support programs.

Fourth and crucially, policy makers need to assess the likelihood that a given problem can be ameliorated, if not solved, through known practices. If several methodologies are now known that are successful in correcting basic skills deficiencies for most students most of the time, then explicit and substantial federal programmatic support is in order. If not, or if more techniques are needed, or if the techniques we know require classroom teachers to learn major new skills, then a program of applied research or demonstration projects may need to be added to the local support program.

The preceding chapters support the view that several classroom methodologies are already developed that could become the base of a broad support program. Certainly we know much more now about how to help adolescents than was known about how to help preschoolers or elementary grade students when we embarked on Head Start or Title I. The broad variations among these project designs suggest, however, that it may be desirable to have more local flexibility than is now available under most federal categorical programs. In addition, the clear need to assist many secondary teachers to learn new ways of dealing with these problem situations indicates that applied research and demonstration may be important as well.

The questions thus far considered are "technical," in that they depend in part on the existing state of knowledge, but how one interprets the available data also depends on essentially normative judgment. A second set of issues is essentially political in nature.

Political Issues

One crucial political issue that influences the choice of a federal assistance strategy is the desired degree of regulatory control. The history of Title I is one of increasingly specific regulations--over fiscal administration, program design, application, and reporting. Supporters of this approach feel strongly that such controls are necessary to insure that the target group is actually served and that program money is not misspent. Without tight regulations, they argue, any program becomes general aid. The experience of Title I, especially in the early years, suggests that they are right about this. The choice of a categorical support program is the natural extension of this political perspective.

But in recent years, there has been a growing political backlash against strict federal controls, even when they are accompanied by large sums of money. Any program with strict regulations poses a threat to highly regarded local control, no matter how nicely the statute is written. The nature of many project designs for the secondary grades is such that considerable local flexibility is required. Several of the more attractive and innovative designs are difficult to reconcile with strict interpretations of Title I supplanting and general aid prohibitions. To this extent, a tightly controlled categorical support program would be less desirable than other strategies, such as bloc grants.

However, this must be balanced against the known congressional preference for controlling its money. A highly funded, highly controlled program would be more desirable than a more flexible strategy with only token funding. Thus the issue of strict or loose control is really a question about money.

Money is the second political issue on the list. Deciding on a federal strategy is highly influenced by how much money is available to address the problem. But asking about the availability of money is another way of assessing political enthusiasm. With respect to basic skills acquisition, there is a consensus that the problem is real, but little enthusiasm will be generated if, for example, Congress is most concerned about trimming the budget. Does a particular program coincide with the interests of powerful groups? If so, it may be seen as preferable to another strategy with greater technical merit. A categorical basic skills support program would get more money into the schools and for that reason would appeal to state and local education officials and teacher organizations. Testing, an element of some basic skills proposals, is unpopular with teachers, but seems consistent with the prevailing legislative temperament. Is there a constituency? No new program will succeed without its own constituency. A basic skills program could induce widespread support if it potentially benefitted not just the poor but also middle-class children who do badly in school.

Overall, the next two years seem an auspicious time for obtaining major federal support. The renewal of ESEA provides the opportunity to alter and expand Title I or to reorganize federal assistance to education along some new pattern that would give greater and more appropriate attention to youth. However, the safest path would be to make any new proposal look as much like Title I as possible.

Finally, the policy maker needs to consider whether a particular strategy will inadvertently affect some nominally unrelated matter, whether, to put the point differently, a program initiative is likely to spawn unpredicted consequences. With respect to basic skills, for example, it may be the case that using data concerning low-achieving youngsters to allocate federal money may perversely reward school districts that are doing the worst job, while discouraging others from doing better.

Also, as Chapter I noted, a stress on basic skills might collide with a preference for pluralism, both in society and in its schools. In less philosophical terms, with school time in relatively short supply, trade-offs between basic skills instruction and other school subjects inevitably must be made. There may also be some lack of fit between basic skills and certain pedagogies.

Any new policy may also have unintended consequences on an existing program, such as Title I, making its tight regulatory structure more difficult to enforce or effecting a subtle redistribution of its funds at state or local levels as a way of rebalancing a delicate financial system. For example, a new program offering money to provide for intermediate and secondary students could have no impact if it is used as an excuse to remove even the low level of Title I funds currently reaching those grades.

Devising a Strategy

In the best of all possible worlds, a policy analyst would have found simple, unambiguous answers to all of the technical and political questions raised in the preceding section and would discover that these answers all indicated a particular type of federal assistance (say, matching grants) as the most appropriate and feasible. In fact, this has not happened. For some questions we find reasonably secure answers, for other questions we find several equally plausible answers, and for a few we have as yet found no answers at all. As a result, no single type of federal assistance emerges as unquestionably the most appropriate strategy for advancing adolescent basic skills.

It may or may not be reassuring to know that this is not unusual. As we suggested in Chapter 1, policy analysis is not a science, but an endeavor in which both the analyst and the policy maker proceed in the face of substantial indeterminacy. In fact, the only unambiguous policy strategies are to be found in textbooks. One set of hunches, values, and knowledge suggests one mode of federal action; another equally plausible set suggests another approach. Under these circumstances, the sensible next step is to delineate some of these alternative federal strategies in greater detail, indicating the trade-offs that each demands.

The next four chapters outline four such proposals for providing federal assistance to educationally disadvantaged secondary students. Proposals A and B (Chapters X and XI) are both categorical programs. The first represents a relatively conservative position. It stresses poverty as a measure of need for educational assistance and in most other ways departs as little as possible from the form and substance of Title I. The second proposal makes a modest departure, introducing the use of a direct measure of educational achievement as the basis of defining the target group of a categorical program. In our opinion, there are several good reasons for using such a definition among adolescents. In addition, proposals of this type have previously been introduced by Representative Quie, have found some favor within the Congress, and pose the possibility of a less class-bound educational assistance strategy.

Proposal C (Chapter XII) is a program of the bloc-grant type. Its appeal is that it could free compensatory education for adolescents from some, though not all, of the red tape and regulations that have developed around categorical programs. In addition, many of the better adolescent projects with which we are familiar do not fit comfortably within Title I regulations, and a bloc-grant program would provide states with the flexibility to create somewhat more innovative local projects.

Proposal D (Chapter XIII) outlines the applied research and demonstration components that we believe ought to be added to any of the other three programs. It has been designed after carefully considering what seems to have been learned by research and development programs in the past decade. However, this program could be funded and even legislated separately from the other programs, and represents, to that extent, a fall-back position that would at least provide for some additional attention to the needs of adolescents at a price that even the most conservative legislators should be willing to pay.

There is no proposal based on matching grants. This is because we were unable to find a feasible way to balance the distribution of money against questions of equity and common sense. Matching-grant programs have considerable intuitive appeal. But they invariably either reward those states that had primarily state financing of education rather than local financing, or they raise definitional problems at the level of local school budgets that can only be resolved by a quagmire of federal regulations antithetical to the spirit of matching-grant programs. Thus, in the end, we had to do without a proposal of this type.*

Each of the four proposals is discussed in detail because we hope that both professional and lay readers will contribute to their debate. In the end, a choice will have to be made according to which strategy can make the best, most intuitively convincing case for itself.

To help the debate along, the four proposals have been presented as follows. First, a brief rationale is constructed to advance a particular federal assistance strategy. A federal program is then described that is consistent with those premises, is administratively and technically feasible, and assists secondary students in a direct or indirect manner. It is presented in an advocacy fashion, without caveats. Inevitably, however, each strategy raises issues and choices of its own, and these are called to the reader's attention in a third section of each chapter. The final section introduces specific details of how a given strategy can be put into operation. Here we have gone into such matters as the distribution of money from federal to state or local agencies, the scope of probable regulation, and some of the particulars that would allow a district superintendent, state board of education member, or federal administrator to envision his/her participation in the program.

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*Similarly, there is no proposed program of basic research. Certainly there is much more that basic research could tell us about how to solve the basic skills problems of adolescents. But we hope we have convinced the reader that enough is already known to mount a direct-support or applied-research program.

It is our hope that one or more of these will find a place in the renewal or reconstruction of compensatory education that is occasioned by the upcoming ESEA debates.

X PROPOSAL A: MODIFYING ESEA TITLE I

The following argument can be made to advocate a categorical support program which stresses preventing abuse of program money, and which builds on the present ESEA framework. The reader must realize that this argument represents a hypothetical policy position, not an indisputable statement of research findings. Rather, it is one interpretation of research, previous experience, and political climate. Other interpretations are presented in Chapters XI, XII, and XIII.

Rationale

Modifying present compensatory education practices to serve adolescents as well as young children can be a very simple process. Title I is a proven and well-entrenched vehicle of federal policy, and there is no point to creating yet another bureaucracy to do a job that the Title I organization is already doing.* Compensatory education has always focused unambiguously on low-income families and their school districts. The students most in need of help now are these same Title I eligible students who still have very real special educational needs, but are beyond the scope of present Title I activities.

The changes that are needed--both in the schools and in policy--are incremental. Effective designs are already in existence for serving adolescent disadvantaged students. Although they are not widely used, they are relatively simple for local districts to implement. Districts are not using these designs now because they lack leadership and are not aware of the importance of continuing special efforts during the later school years. Most important, the districts lack the money to support special incremental programs. Title I funds are still needed in the elementary grades, and over the last decade considerable inertia has been created in the distribution of this money to elementary schools. It is difficult, if not impossible, to break out of this pattern in the absence of both federal leadership and federal funds.

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*The rationales for the programs presented in Chapters X through XIII are drawn sometimes from quite conflicting interpretations and judgments. For example, Proposal A places a positive value on federal control, which is directly contradicted by the assumptions of Proposal C. Each rationale represents a defensible point of view; we have not attempted to resolve their differences in philosophy.

As extension of Title I also offers the greatest chance of preventing abuse of money. Federal money should be distinct from state and local money and should be reserved for special needs only. Despite early difficulties, the federal Title I auditing and regulations system now seems to be quite effective in controlling the use of Title I money, and we should capitalize on this success.

Program Description

ESEA's yearly budget appropriation has risen in fairly steady increments, and the popularity and stability of the program indicate that similar increases can be expected. In our first proposal, a baseline is constructed from Title I FY 78 appropriations, and all further Title I increases are assigned wholly for expenditure in the intermediate and secondary grades.

Distribution of money would follow the present pattern with some important modifications. One option is that a given year's total allocation would be distributed to states, and from them to counties, according to the existing Title I allocation formula based on poverty indices. The result would be that each state (and county) will receive a specific percentage increase over the previous year's funding (or over the baseline in year one).

Under this option, money would be distributed from county to district according to whatever subcounty allocation formula is currently in use, with one modification. In states composed wholly or partially of nonunified districts (that is, districts serving a few grades rather than the K-12 span), only those districts that included grades 7 or above would be eligible for increased funds. Other (elementary only) districts would be held at the funding of the baseline year.

A second option would be to distribute the Title I base (FY 1978) amount as usual, but distribute the secondary increment according to a formula that weighted a state's share by the relative proportions of secondary aged to elementary aged students within that state. The effect would be to give slightly more money to states that have a proportionately larger population of secondary-aged students. Similar processes would then be used for distribution from state to district levels. Such a scheme has the value of focusing more directly on the adolescent target group.

Under either distribution plan, a district receiving increases will be required to maintain any intermediate/secondary projects funded during the base year (thus preventing a sort of internal supplanting) and to use all increases in funding to sponsor new efforts in the intermediate and secondary grades. In order to determine which intermediate and secondary students required special services, the currently required needs assessment would be extended to cover students in all grades served by a district. The state would assume responsibility for assuring that these things have been done.

This plan should effect a steady and stable balancing of the funds and participation in Title I throughout the elementary and secondary grades. Once a district can demonstrate that Title I money is being divided equally between grades 1-6 and 7-12 (adjusted proportionate to enrollments in these grade groups), restrictions about the expenditure of increments will be removed, subject to the maintenance of this funding balance.

To provide a sensible phase-in period, a modification in Title I law would also be made to allow the first year of funding at a school site to be spent on materials acquisition, development, planning and in-service activities, and other activities vital to insuring the smooth implementation of the project during the following year. Evaluation during that year would consist of an itemized and justified budget for these activities.

Issues and Choices

The plan outlined above is technically fairly simple, but does raise a few specific operational issues, including those listed below. Some of these issues constitute trade-offs that the policy maker must accept and choose among. Others may have a technical solution and will be discussed further in this and subsequent chapters.

> Issue: This plan could be trapped by appropriations increases that are only a very small proportion of the total Title I budget, though perhaps large in absolute dollars. When filtered through a categorical distribution scheme, this could spread money too thin for it to be of much use.
>
> Comment: Chapter XIV addresses the problem of calculating the cost of this program at full implementation and at a minimum initial funding level.
>
> Issue: Title I guidelines and audit procedures apparently have the effect of producing local projects almost exclusively using pull-out designs and imported specialists. These may be the least desirable designs for secondary level programs. Because Proposal A introduces only modest changes in existing Title I practice, it is subject to this complaint.
>
> Comment: In the item outline that follows, some provisions regarding allowable project designs and personnel use have been made that could be inserted in the authorizing legislation. This could ameliorate the problem somewhat. However, the value choice between flexibility and accountability remains. This proposal assumes that policy makers feel that strict audit trails are more important than most project design considerations.
>
> Issue: Any change in Title I cannot avoid having spillover effects on the elementary grade projects that are already established. In this case, even holding the elementary grades harmless in dollar terms will result in a reduction of real resources due to inflation. How does this reduction compare with the simultaneously falling enrollment in the elementary grades? What are the political implications?
>
> Comment: The political implications of this issue are important. The present elementary grade constituency will be unhappy about any decrease in its potential resources, whether in absolute or comparative terms. Secondary teachers and administrators, and the general public's concern over basic skills could provide a lobby to counteract this discontent. These groups are unlikely to be mobilized, however, unless the initial increment of funding is set at a fairly high level.

Detailed Program Outline and Discussion

> Provision: Each year the Congress raises the ESEA Title I appropriation by some increment. We propose that in the future these increments be assigned wholly for expenditures on projects in grades 7 and above.
>
> Money could be distributed among the states and counties according to the existing Title I allocation formula, based on poverty indices. The result would be that each state and county would receive a specific percentage increase over the previous year's funding.

As the previous discussion of issues indicated, some trouble could be encountered here if the first year's increment under this system is too small. The average percentage incremental increase in Title I has been about 9% (absolute dollars), and a first-year increase of this size would provide adequate funds to avoid the worst of the underfunding problems. It should be noted, however, that there have been years when Title I appropriations have increased by less than 1%, and a first-year increment at this level could seriously hamper the proposal. Among the various proposals discussed in this and subsequent chapters, Proposal A would be the least hampered, however, by relatively low initial funding, since there are practically no startup costs at the federal and state levels. Because existing administrative networks and procedures would be used almost intact, this proposal would be congenial to the Congressional tradition of phasing in appropriations.

Distribution to states and counties demonstrates the relative savings incurred by building onto the existing Title I procedures, since no new collection of data is required. Note, however, that the increase of county allocations is subject to normal changes due to shifts of population within states; thus it is possible that a small percentage of counties would not be increased. This would have happened, of course, under Title I whether or not this proposal were adopted.

> Provision: Money is distributed from the county to the district level according to whatever subdistrict allocation

> formula is currently in use for Title I. However, only those districts that include grades 7 or above would be eligible to receive a portion of the incremental increase. The allocation to districts comprising only elementary schools would be held harmless from the previous year, but would not be increased by a share of the county's percentage increment.

This is the first point at which the proposal differs from current practice. Subcounty allocation formulas vary greatly both among and within states, and this proposal is not aimed at their reform. However, specific measures need to be incorporated to cope with the fact that a few states have school districts consisting entirely of either elementary or secondary schools. Since increments in funding are to be reserved for grades 7 and above, those districts composed only of elementary schools (grades 1-6) would receive only an amount equal to the previous year's allocation (subject to demographic changes that would be reflected in the subcounty allocation formula). This means that a definition of "secondary attendance area" must be arrived at and inserted in the legislation. We have used the definition below in the financial simulations reported in Chapter XIV.

> For the purposes of this Proposal, the term "secondary attendance areas" means, in relation to a particular public school serving grades 7 or above, the geographical area in which the children who are normally served by that school reside. Where a school district contains an intermediate or middle school serving grades 6-8, the geographical area in which the children who are normally served by that school reside shall also be considered a secondary attendance area for the purposes of this Proposal.

Because of changes over time in the distribution of the poverty population, some small number of districts would not receive any increment in funds during a given year. In such cases the provisions of this proposal would not apply. It is not the intention of this proposal to force the redistribution of all compensatory education money. Of course, any district could change the distribution of all its Title I base money to serve more older students. But we expect that this would rarely happen.

> Provision: Alternatively, the incremental money could be distributed according to a procedure that weighted the existing Title I formula by the proportion of secondary-aged students

in the state. Similar weighting would be used at county and district levels.

This procedure maintains the emphasis on poverty and adds a companion emphasis on adolescents. The base count of adolescents would be derived from residence rather than enrollment. Districts with the highest poverty rates are also those with the highest dropout rates. If secondary enrollment counts were used to distribute money, the result would be to underfund exactly those districts that are most in need of help. Therefore, a residence count is used instead.

> Provision: The SEA will determine that LEAs have not used incremental monies provided here to supplant Title I basic funds that had previously funded projects in grades 7 or above.

This amounts to constructing a hold-harmless clause on existing intermediate and secondary level projects. Without it, the total effect of the proposal would be to decrease rather than increase compensatory education for older students, since the 20% of Title I funds now spent in these grades could simply be shifted into the elementary grades. In unified districts, it is imperative to insure that new money is added to whatever effort is being made in the upper grades and that the total effect is to increase effort in the intermediate and secondary schools. Unified districts may have to adopt some new accounting procedures to assure this, but these procedures are not particularly burdensome. Authority is placed with the SEA to assure that the intention of the new funds is carried out, presumably as part of the LEA-to-SEA application for funds.

> Provision: LEAs must identify educationally disadvantaged students in all grades served by that district and must assess their special educational needs.

As part of the Title I application and planning process, LEAs are required to conduct a needs assessment. In the past, one mechanism for excluding eligible and needy secondary students from Title I services has been to ignore the secondary grades when the needs assessment is being conducted. In recent years, federal review teams have begun to discourage this, but have met with limited success. An example of this change of informal policy is seen in the 1974 OE program review for California:

> "State instructions to LEAs do not convey the importance of the comprehensive assessment of the needs of educationally deprived children, aged 5-17, in target areas. Some LEAs, presumably because of State policy to emphasize primary grade programs, do not survey the needs of children in the higher grades, who, under the regulations, are eligible for services if they are educationally deprived and reside in target areas."[1]

Current law and regulations (including 1976 regulations) are sufficiently ambiguous to preclude an assurance that the needs assessment will include students in the upper grades. Federal program auditors from outside the Office of Education, employing a stricter reading of the needs assessment regulation, began to criticize policies restricting needs assessments to the early grades well before a sense of this deficiency was reflected in OE documents.*

Since neither the audits nor the later OE program reviews seem to have been effective in making the "comprehensive needs assessment" truly comprehensive (i.e., as to grade levels), the stipulation we recommend above is necessary to remove the apparent discretionary power of LEAS to exclude older students.

> Provision: If the alternative distribution formula is used, which weights LEA grants by counts of secondary-aged children in residence, then LEAs are required to estimate the number

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*An audit of the Hayward, California, LEA covering 1968-72, discusses the finding that many early-grade students scoring at or above national norms were participating in Title I programs (60% over the lowest quartile; 30% in the highest two quartiles). The auditors cited state guidelines in effect at the time and said:

> "We believe a major reason for [these children's] selection was the District's adherence to the State's recommendations that (1) children enrolled in a preschool project be enrolled in a comprehensive compensatory education program, and (2) students be retained in the program for a minimum of 3 years. These criteria do not necessarily assure that children with the greatest educational needs are selected for the program."[2]

In Massachusetts, federal auditors criticized the state for not conducting needs assessments at various grade levels rather than limiting the needs assessments to the elementary grades only.[3]

> of secondary-aged students not currently enrolled in schools who are in need of the program's services. Up to 25% of "secondary" funds could be used to serve this out-of-school population.

This provision is similar, on the one hand, to old Title VIII (dropout) and, on the other hand, to current instructions to serve educationally disadvantaged students in nonpublic schools. However, service to these students is made optional for two reasons. First, because the needs and abilities of LEAs will differ widely with respect to assisting out-of-school students, it would be senselessly restrictive to mandate a level of service here. Second, most schools will be best prepared initially to deal with students still in school; for the first years, when total funding may be low, this concentration within the schools seems wise.

> Provision: The SEA will determine, as a condition of distributing the incremental money provided here, that LEAs have engaged in adequate planning for school and district projects and have provided for inservice training or retraining of project staff that is adequate to the design of the project(s) proposed.

As of the 1974 amendments, Title I specifically states that LEAs may use money for inservice and retraining activities. We believe that almost all districts will need a good deal of personnel development for secondary projects. However, the needs of individual districts and schools will vary a great deal, both among themselves and across years. Therefore it seems unhelpful to require that every district must spend the same percentage of its money on these activities. Instead, the SEA is given the authority to determine whether LEAs have provided appropriately for inservice training as part of the application process.

> Provision: Inservice activities within LEAs may include classroom teachers who teach substantial numbers of project students, so long as the inservice training contributes specifically to helping these teachers meet the special educational needs of project students and is related to the overall project design.

The involvement of the regular classroom teacher is particularly vital to establishing stable intermediate and secondary level compensatory education projects and to bringing the low-achieving student back into the intellectual life of the school. The 1976 regulations for Title I have adopted specific provisions dealing with training, which resemble the changes we have proposed.[4] There remains some ambiguity, however, as to whether regular classroom teachers must teach only Title I participants in the regular classroom. Although we believe the 1976 modification is a useful one, we would clarify that a regular classroom teacher of substantial numbers of Title I participants could be involved in Title I inservice training. The proviso that the training must relate to the overall project design and contribute specifically to helping teachers meet the special educational needs of Title I students should preclude these training activities from being used as general aid.

> Provision: During the first year of funding, a school site project may spend its budget on planning and inservice activities, materials development, and such other activities as are vital to insuring the smooth implementation of the project during the following year.

Because Proposal A is attached to an existing program (ESEA Title I) it does not include a specific startup phase that would ordinarily fund the necessary planning activities. Secondary projects, in particular, need time to plan for smooth organizational transition and to develop sound pedagogical designs and strong staffs. This provision allows them to do so during the first year of funding at a given site. It also provides a modicum of insurance against the possibility of an unduly small incremental increase during the first year; funds that might not be adequate to a full year of program operation (especially the first year) would nevertheless be extremely helpful if used for these preparation activities. However, some districts already have relatively well-developed secondary level programs, and would not need this planning time. Therefore this startup period has been made optional rather than mandatory.

> Provision: Two additional appropriations will be made to assist the necessary teacher training. First, an appropriation is to be added for establishing projects of applied research, demonstration, and dissemination of the inservice and retraining activities of teachers in secondary and compensatory education projects.

> Second, an appropriation is to be added for establishing grants to a selected number of schools or departments of education within IHEs in order to upgrade their programs in the area of basic skills instruction for intermediate and secondary schools.

Once money is provided to local projects, the skills, confidence, and enthusiasm of project teachers will be the most crucial factor in project success. These two additional appropriations would provide the basis for building teacher skills both directly, through the development and dissemination of models of inservice training for LEA use, and indirectly, by strengthening the capacity of Institutes of Higher Education (IHEs) to serve teacher communities. However, there is little argument that teacher-education systems are in a state of disarray at the present time and are still producing too many entering teachers for the current job market. Under these circumstances, it would be wasteful and counterproductive to provide across-the-board funding. Instead, money is provided to a selection of those IHEs that are best equipped to be of immediate assistance to LEAs.

> Provision: In order to prevent spreading money too thin, some restriction is needed regarding the number and size of projects.

Current Title I language specifies that projects must be of sufficient "size, scope and quality" and that "a limited number of sites" is to be funded. Because there are fewer intermediate and secondary schools per district, this is less of a problem in any event than at the elementary school level. Nevertheless, existing language should be retained.

> Provision: A district may spend its incremental money on elementary school projects if and only if it can demonstrate that in the previous year, the total amount of money received under all parts of Title I was equally divided between grades 1-6 and grades 7-12, adjusted proportionate to enrollment in these grade groups.

It is not the object of this proposal to permanently favor the secondary grades, but only to achieve a balance that is consistent with the age distribution and special educational needs of the entire eligible population. As soon as this balance has been achieved by the district (as may already be the case in one or two states), restrictions on the use of incremental money are to be removed. This is similar to the achievement of a "unitary district" for the purposes of desegregation.

XI PROPOSAL B: A PROGRAM FOR BASIC SKILLS USING ACHIEVEMENT CRITERIA MEASURES

Chapter XI presents an argument for a categorical support program of a different sort. This one would be based on a target group defined by low achievement in basic skills. However, note that this argument is a hypothetical policy position, not an indisputable research conclusion. Rather, it is one interpretation of research, previous experience, and political climate. Other interpretations are presented in Chapters X, XII, and XIII.

Rationale

Compensatory education is designed to raise the achievement of students who are doing so poorly in school that they hamper both their own future and that of their society. The Title I distribution formula has used a poverty measure as a proxy for low achievement for two reasons. First, it was assumed that most low-achieveing children were from poor families and that they were isolated in a few schools with high concentrations of poor, low-achieving students. Second, direct measures of either achievement or ability are not particularly reliable for the K-3 population that Title I has concentrated on.

When we consider adolescents, however, this situation changes greatly. While many adolescents from low-income families do poorly in school, so do some of their middle- and upper-income counterparts. Because secondary schools draw their students from larger areas, there is less concentration of low-income, low-achieving students at this level than in elementary schools, and concentration is further reduced by conscious desegregation policies. These factors make the use of allocation formulas based on poverty or other achievement proxies, less sensible for the upper grades than for the elementary grades.

In addition, poverty proxies are largely unnecessary since low-achieving adolescent students can be identified directly with great accuracy. The assessment of the basic skills of secondary students, while not an inconsequential task, is certainly feasible on both theoretical and practical levels. As students mature, the range of their achievement of basic skills increases. The increased range from the lowest to the highest allows for the development of a more valid and reliable assessment. That is, it is easier to differentiate the highest from the lowest when the differences are greater.

Furthermore, secondary students have better developed test-taking behavior than do elementary students. Because they are fully aware of what is expected of them on tests, the emphasis in test development can be placed on developing valid test items rather than on developing test items that students can handle, as often occurs in developing tests for primary grade students. This increased ability in test taking, therefore, allows more valid and reliable tests to be developed.

The sum of these technical factors is that the adolescent target groups of low-achieving students can be located and helped directly, without having to resort to either unreliable predictive tests or to proxy measures that inevitably add complicated political distinctions. For this reason, a policy to assist adolescents should not burden itself with existing distribution formulas that do not serve its purpose very well.*

However, even though there is a consensus about the need to assist adolescents, and locating these students is relatively simple, standards of appropriate achievement vary greatly. A single national standard of adequate achievement could be set. Indeed, the National Assessment of Educational Progress could be adapted to this purpose; its present sampling design and charter do not permit state-by-state comparisons but this could be remedied easily. However, many believe that the use of a single test nationwide would be undesirable. They hold that, in the final analysis, it is the constitutional responsibility of individual states, not the federal government, to define and enforce educational standards. When states are able to define their own goals in basic skills for adolescents, then it is greatly in the public interest for the federal government to give assistance to states who wish it. Therefore, the use of individual state criterion-referenced tests is the proper basis for a categorical program.

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*This argument is based on the interpretation of the known characteristics of tests and test-takers. Sophisticated statistical analyses can do little to prove or disprove this point. However, the scores of preschool and primary grade children on intelligence tests, with which most norm-based tests are very highly correlated, are far less stable than scores of older children.

Title I is an adequate and appropriate vehicle for delivering compensatory education to those whom it currently serves; it should not be altered. However, it does not serve the intermediate and secondary population adequately, and, given the differences in student identification and project design that are desirable for older students, adolescents would be better served by a separate program. A separate program will be politically feasible if and when it can mobilize the support of a constituency other than that of the present Title I program. By using a direct measure of basic skills achievement, a new program would recognize that basic skills is a concern not just for poor families but for every member of society and would create the strong political alliance needed to support a new effort.

Program Description

Under our second proposal, a new program would be established for the specific purpose of assisting states to serve those intermediate and secondary students who demonstrate an unsatisfactory level of achievement in basic skills. The method used to determine whether a student's achievement was satisfactory would be a criterion-referenced test of basic skills--including at least reading, writing, and calculating. However, the exact form of test used and the level of performance considered satisfactory would be determined individually by each state that chose to participate.

All funds for this proposal would be new money and would be distributed by formulas that varied according to the level of distribution. A nationally administered, criterion-referenced test could be used, if states agreed to this method. However, if the political climate disfavors the comparison of average achievement among states and the construction of a single federal achievement standard, then alternative methods are available. A distribution based on state population is one possibility. However, even states of the same size differ greatly in their need to assist a low-achieving subpopulation.

If a relationship between income levels and achievement levels can be identified, then an appropriately weighted distribution of family income could be used as a proxy for a direct count of the low-achieving children in a state. In this way, one state with a high proportion of poor families would receive more money than another state of equal size that had wealthier families.

Each participating state would produce and administer to its seventh- and tenth-grade students a criterion-referenced test of basic skills and would determine a level of satisfactory competence in basic skills, expressed by a score on this test. The federal level would provide technical assistance to states in developing tests and setting criteria, but would not impose any uniform standard across states.*

The criterion-referenced test and its cutoff score would then become the basis of state-to-local distribution of money, much as the poverty criteria operate for state-to-local distribution in Title I. (Districts composed only of elementary schools would not qualify for distribution, but all other districts would be eligible). Thus a district's share of a state's basic skills money would depend on its share of students needing assistance in basic skills, regardless of the wealth of either the pupil or the school district.

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*It is worth debating whether any agency can provide technical assistance without in effect setting standards. The history of the Office of Planning, Budgeting, and Evaluation suggests that much can be done to assist and improve the quality of local evaluations; it also suggests that when national program goals are ambiguous or absent, technical standards may be used to fill the vacuum. This is an inevitable risk, but one that seems preferable to the alternative risk of having inept, inaccurate, and irrelevant measurement of target groups and program effects. It is also worth noting that for several years NAEP has been practicing the delicate art of providing technical assistance to states without setting proficiency standards.

The district would have a measure of discretion over the selection of secondary schools in which program monies would be used. As in Title I, selection of pedagogy and project design would be a matter of local choice, so long as federal funds did not supplant existing local services.

The program suggested here, while relatively straightforward to administer once in place, does entail a complicated startup phase. Therefore we propose a two year planning phase to precede full implementation. During this time state allocations would be used to establish the statewide criterion in basic skills, develop or select a criterion-referenced test for use in grades 7 and 10, and do the necessary planning and inservice training at the local level.

Issues and Choices

Proposal B raises a variety of technical and political issues that need to be addressed, including those described below. Some of these are taken up in the technical discussion that follows, others are reserved for discussion in Chapter XIV, and a few represent irreducible choices that the policymaker must face.

> Issue: A distribution of this type can be accused of rewarding low performance rather than rewarding effort to correct it. It is also subject to political manipulation of the criterion in order to differentially serve certain types of districts rather than others. Simulations are needed to determine the interdistrict effects of level of funding and level of criterion. Ways also need to be sought to provide reward for achievement rather than failure.
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> Comment: This is a central dilemma of any program based on an achievement criterion. There are formulas that, although complicated, can minimize any of these complaints; it is impossible to devise one that can simultaneously minimize them all. In essence these are trade-offs from among which the policymaker must choose.
>
> Issue: Below the district level, distribution runs two risks. If total funding is low and schools are served strictly in order of their concentration of low-achieving students, the distribution will approach that of Title I and may fail to adequately serve low achievers who aren't poor, thus jeopardizing its constituency coalition. On the other hand, if districts have complete discretion over which schools to serve, money might go primarily to schools serving politically powerful residential areas, and fail to serve any low income students.

Comment: Since there are fewer secondary than elementary schools per district, this is less of a problem than it might be in a program designed for a K-12 target group. However, later discussions explore compromise formulas that help to protect the interests of both groups.

Issue: This plan leaves the determination of basic skills goals and criteria to the states. Nevertheless, to the extent that it implicitly favors basic skills over other school endeavors, it still distorts state preferences.

Comment: Unfortunately, some distortion of local preference is almost inevitable in any federal action. In fact, the underlying assumption of any policy is that it will change actions of people who were perceived not to be acting in the best interests of the constituents. We began this policy analysis with an explicit value preference for adolescent basic skills, and this is one of the places where it necessarily determines our actions.

Issue: It may be that any federal supplanting regulation will finally drive local project designs toward relying on pull-out classes and separate faculties. If we believe that other designs are desirable, how can they be encouraged without inviting flagrant abuse?

Comment: This dilemma, which arose in Proposal A as well, runs through all federal education programs. The subsequent discussion offers some partial alleviation in favor of more flexible local designs, but does so at the risk of placing more attention on audit trails.

Detailed Program Outline and Discussion

Phase 1: Planning and Development

This phase will last two fiscal years.

Provision: Each state that wants to participate will receive a planning grant for a specified amount of money to be determined by a formula similar to that used for ESEA Title III. This money may be used in order to develop, improve, validate, and pretest instruments to measure the basic skills of students in grades 7 and 10.

Grades 7 and 10 were chosen for several reasons. First, this provides for the assessment of at least some of the students in every school that we have defined as a secondary attendance area, regardless of its organization (K-8, 7-9, 10-12) and thus preserves organizational neutrality. Second, since this strategy is intended to help low-achieving students while there is still time, grade 7 testing will encourage districts to begin their remedial treatment there.

If testing for the purposes of funding were confined to a single grade, a strong incentive would be created for designing the very one-shot projects we want to discourage, so we have provided for testing at grade 10 as well. Grade 10 was chosen as the last grade when the majority of students may be expected still to be enrolled in school. Most grade 10 students are about 15 years old. The compulsory attendance laws of most states allow students to drop out of school at age 16. Therefore, tests at grades 11 or 12 would likely be artificially high because many of the worst students would not be in school any longer. But the identification of low achievers in grade 10, if coupled with program funding, should encourage schools either to give these students enough additional help to allow them to remain in school or to make a last-minute effort to arm them with the minimum skills they will need in the society and economy beyond school.

Finally, testing at two grade levels satisfies the technical requirement for minimizing the possibility that any one grade in a district or a state may be unrepresentative of its more generalized needs throughout the secondary grade span.

The most direct way of identifying the nation's low-achieving students would be a national standard and instrument for determining the members of this category. As we have indicated, there are no serious technical barriers to developing such a test and criterion. However, there are also legal and political considerations to be weighed.

First, such a procedure assumes, or at least strongly implies, that the federal government has a right to define educational standards across the nation. Constitutional authority for this is unlikely, to say the least. Second, to prevent even the grossest of abuses, test administration would have to be controlled by some federal agency. Even the most liberal of states would be unlikely to stand for this. Third, such a national testing would fail to represent strong and important differences among state values, needs, and political cultures. Fourth, some states would inevitably rank low in a national comparison. This is unlikely to produce willing participation and support by these states. Finally, a single standard set by some anonymous federal agency would leave the program without the chance of obtaining the active support of parents, teachers, administrators, and citizens through the process of setting their own goals. Altogether, it seems preferable to use individual state tests.

> Provision: Establish (1) statewide criteria for minimum competency in basic skills as measured by these instruments and (2) statewide standards, measurable by these tests, below which a student is considered to be in special need of basic skills instruction.

It is not the intent of this strategy that basic skills or goals statements be the same in each state. Nevertheless, some common agreement over a definition of basic skills is needed in order to administer the program and develop the tests. This is not easy to achieve, because basic skills are necessarily those that are a part of almost every task, both practical and intellectual. Pursued to its limits, the definition of basic skills becomes a philosophical quandary.

We can suggest, however, that broad consensus and common sense point to a definition of adult basic skills that focuses on reading (both literal and inferential), grammatical and informative writing, and arithmetic. A wider view of basic skills may also include such things as the capacity for logical analysis and the ability to speak grammatical English. Criterion tests can and have been developed to gauge all of these skills. Usually this is done, at least in part, by testing the competent application of a basic skill to an everyday task, such as figuring change from a purchase, filling out an application, reading a bus schedule, and so forth.

To establish the kind of program proposed here, we suggest a definition along the following lines.

> Basic skills means competent abilities in at least reading, writing, and calculation. A test of basic skills would establish whether an individual is competent in the performance of these activities and could proceed either by testing the skills directly or by testing their application to concrete tasks typical of school or adult society.

A criterion test embodies a standard sufficiently clear and specific that a tested individual may be said to have passed or failed the test, regardless of who else may have taken the test or how well she/he may have done.

> Provision: Phase I money may be used to plan at the school site for the implementation of special projects. This may include development, organization, training of personnel, selection or production of materials, and adjustment of administrative procedures.

Many states already have criterion tests that can be used with only minimal adjustments. They should not be penalized (i.e., given disproportionately small monetary favors compared to other states that have not made this preparation) and should be eligible for Phase 1 grants on an equal basis. However, if the money can be used only to develop or improve tests, the result will be an enormous waste of funds in those states that are ahead of the game, as well as completely unnecessary duplication of effort.

Obviously, test instrument development is only one of many preparations a state must make and is perhaps not even the most important of these. At the top of the list is the planning of local projects and the training or retraining of personnel. Allowing states wide discretion in how Phase 1 monies are used means that they can both adapt to the variety of political pressures and can receive a "reward" for test development work they have already done. Both improve the chances of a successful experience with the full implementation of Phase 2.

> Provision: The Commissioner will provide technical assistance to states, districts, and schools during this planning period. Activities could include providing a catalogue of objectives and items from which states might choose to construct tests; suggesting methodologies for developing, pretesting, scoring, and reporting tests; assisting in training or retraining of project personnel; and so on.

A fair amount of time, effort, and money could be wasted if 50 states set out to design 50 different tests, all serving approximately the same purposes. Even assuming that a reasonable number of states did not have to start from scratch, a federal level technical assistance group could forestall 25-30 reinventions of the wheel by performing or contracting for the development of those things (including methodologies) that were common problems. Individual states would have an incentive to use this service in order to free more of their Phase 1 money to do training and planning.*

Estimates of time and cost for this type of central assistance are presented in Chapter XIV and are compared with time and cost estimates for other test development options in Appendix C.

The value of federal technical assistance agencies has been questioned frequently. We believe that many of the past deficiencies of federal technical assistance are due in large part to the fact that these agencies have been assigned inappropriate tasks. This, however, seems to be an unusually appropriate task for technical leadership.

> Provision: At any point in Phase 1, a state may submit to the Commissioner a pre-existent, criterion-referenced test for approval. The Commissioner may approve these tests for use in the program if they meet standards of test construction and validation such as the Commissioner shall specify.

There appear to be at least four methods by which states can produce the criterion-referenced tests that Proposal B requires. They are:

(1) Use a pre-existing criterion-referenced test developed for use in that state.

(2) Purchase a suitable criterion-referenced test from a test publisher. (CTBS, MAT, ETS, and others have already done considerable amounts of work along these lines.)

(3) Develop a criterion-referenced test from the beginning, conducting all phases within the state, or through individual state contract to other institutions.

(4) Develop a criterion-referenced test by drawing on the federal technical assistance group for all but the last stages of this process.

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*In fact, the federal government already sponsors NAEP, which gives technical assistance to states wishing to develop their own criterion tests. With appropriate additional funding, NAEP might be the best place for this technical assistance center.

Each of these options has different time and cost parameters. Each is discussed in Appendix C. Because there is no point in forcing states that already have acceptable or nearly acceptable criterion tests to throw them away and start again, a mechanism is provided here to capitalize on previous investments by local, state, and federal agencies in test development.

Phase 2: Program Operation

Provision: A state may be approved for receiving funds with which to implement its program if and when it has submitted the following.

- A criterion-referenced test for use in grades 7 and 10 that meets the standards suggested above and detailed by the Commissioner.
- A statement of the method of scoring these tests so as to produce an unambiguous standard for determining whether an individual district, school, or pupil is eligible for participation.
- A statement of the index score below which a student is to be considered in serious and special need of basic skills assistance.
- A plan for the implementation of the basic skills program in that state.

These requirements simply provide a formal mechanism for entry into program operation and a mechanism for seeing that test-scoring mechanisms and criterion cutoffs are minimally valid.

Provision: States that have not yet met the requirements for Phase 2 of program operation will be eligible to receive a continuation of the planning grant in amounts not to exceed those received during Phase 1.

The Commissioner may prorate planning grants and operational allocations for a half year each if a state is able to complete preparation and approval by midyear.

If there were no provision for individual extensions of the planning phase, the Commissioner would be under enormous pressure to approve full operation in states that had no appropriate test or standard. Experience with Title I has demonstrated vividly that it is impossible to cut off funds or to break their flow. By allowing planning grants to be continued in lieu of Phase 2 money, the abuses can at least be reduced.

Distribution of Money From the Federal Level to the States

Provision: Monies would be distributed on the basis of state population weighted by the distribution of income within the state.

The most logical distribution scheme would compare directly the number of low-achieving students in each state according to a common standard. We have discussed above in some detail why a direct measure that compares the number of low-achieving students in each state may be undesirable. The inverse would be to distribute money according to relative state populations, or school enrollments, with only a modifier to protect the smallest states. (Senators from small states have an abundance of formulas that would suit this purpose.) Such a formula avoids the many technical and political problems of the first option and has the added assets of both being extremely easy to administer and explain and of preventing states from getting larger and larger proportions of the total national budget by virtue of deliberately or accidentally getting worse each year.

Unfortunately, however, there is also a serious flaw with this scheme. Such a distribution would inevitably reward states with small populations and relatively high achievement at the expense of those states that have large populations and relatively low achievement among their students. For example, Iowa would be able to spend far more dollars per child on its relatively few low achievers, while Georgia would be able to spend very few dollars per child on its relatively high number of students in need of special help.

At present, the best solution seems to be to modify state population by some proxy that acknowledges the higher probability of some groups to have low-achieving members, while not requiring direct student testing.

One of the most logical and easily available proxies is the family income level of school-age children. We can establish the comparative prevalence of some measure of low basic skills achievement across all income categories. That is, we can tell how much more likely it is that a child in one family income category (e.g., $2,000-$4,000) will have very low achievement than a child in another family income category (e.g., \$10,000-\$15,000). Knowing this, we can establish a series of weights for income groups that reflect their relative tendency to have low-achieving children. Then all we need to know about a state is the distribution of family incomes, data which are obtainable through the Bureau of the Census and other services. By matching this distribution of income with the weights for low achievement, money could be distributed to states without direct measures that would label some states "smart" (because they had few low-achieving students) and others "dumb" (because they had many). In addition, under these conditions a strong case could be made that the federal-to-state distribution of funds reflected the basic skill needs of children at all income levels in that state.

Distributing Money from the State Level to Districts

Provision: Each state will administer its approved test to grades 7 and 10, testing either the entire population or a matrix sample.

Most states will probably decide in favor of full population testing at the required grade levels. Appendix C discusses the advantages and difficulties of various testing samples.

Provision: States would distribute their money among districts in proportion to their various needs, as indicated by each district's performance compared to the criterion index previously approved by the Commissioner. We suggest an allocation formula similar to the one below.

$$\sum_{i=1}^{N} C - S_i, \quad S_i \text{ less than } C \quad ,$$

where the test is administered once a year, C is the approved state criterion, and S_i is the score of an individual student.

Again, we have considered a range of formulas and a few combinations. The four criteria in our decision were that:

- Money should not be spread so thin that many districts can mount only minimal projects. This indicates the need for a district minimum allocation similar to that now used in Title I.

- Money should not be spread so thin among students as to turn this decidedly categorical program into general aid. This indicates the need to put a ceiling on the state competency criterion or at least on its distribution index for a given year.
- We are not only concerned about the number of students below minimum competency levels, but also with how far behind they are. This indicates that a simple distribution by proportion will be inappropriate.

These issues are discussed in Appendix D along with specific formulas and their properties.

> Provision: A state may allocate up to 15% of its total funds to be distributed to districts in such a way as to reward those with successful projects. Formulas for incentive distribution will be subject to review by the Commissioner.

Title I has been criticized repeatedly because states and districts receive the same allocations year after year regardless of whether their projects are good, bad, or indifferent. There is not much to be done about this however, since Title I distribution formulas are indifferent to student achievement. Proposal B, on the other hand, is based on student achievement, making incentives or rewards much more feasible.

However, we could not rationalize the imposition of a federal formula to accomplish this. One of the features of Proposal B is its emphasis on state values and goals; establishing a direct link between local project assessment and federal level rewards seemed counterproductive. And, to be honest, we have not yet found a formula that created stronger rewards for doing well than rewards for doing poorly.

Therefore, we have fallen back on the dual provision of limiting the proportion of funds that may be used for rewards and leaving the choice of formula to SEAs. We still believe that the proposition is attractive. Appendix D discusses two of the possible formulas we considered for providing incentives based on district performance.

Distribution of Money from the District Level to Schools

> Provision: The district may select as project sites any schools serving grades 7 or above, so long as at least 50% of project funds are spent in Title I eligible schools, subject to other provisions to be discussed below. Districts are encouraged to adopt policies of open enrollment in project schools.
>
> Districts are to spend the funds received under this program to establish basic skills projects in local schools to serve those students who have been identified by the criterion described above.

At the district level, we have created a kind of bank account that allows considerable flexibility about where the district chooses to implement projects. This was done in order to avoid what we believe to be serious difficulties with ranking systems.

If a ranking system is used, districts can rank all schools according to their test results and can divide the district money in proportion to the severity of the need among schools. However, this would almost surely spread the money too thin to be of any use at individual schools, especially during the early years.

Alternatively, a procedure can be followed similar to that used in Title I, with districts ranking all schools according to their test results and installing projects in order of this ranking. This procedure has two drawbacks. First, there is some chance that those schools with the worst problems also have the least expertise for solving them. If they are served first and exclusively, this commits the district to rather poor results during the first several years of implementation. Second, within some districts, there are very high correlations between those schools with the highest proportion of low-achieving students and those with the highest proportion of students from low-income families. Thus, to choose this option for within-district distribution would be to have recreated Title I at enormous difficulty. This would do injury to both the program's stated intention of serving low-achieving students without respect to income and to its political foundation.

The provision above creates what we feel is a workable and sensible compromise. Not all schools are equally able, at least at first, to mount successful and attractive special projects. This provision allows districts to choose initially those schools where projects have the best chance of being well implemented, while avoiding the problem of spreading money too thin. The instruction to spend at least 50% of district money in Title I eligible schools will result, we expect, in districts spending exactly 50% of their money in Title I eligible schools. This prevents the program from ignoring any income group and helps to build effective community alliances for the program. In states that set aside money for rewarding successful districts, LEAs can win money for severely troublesome schools through the efforts of projects with more manageable situations.

> Provision: Districts may designate up to 25% of the local grant to establish projects designed to assist either secondary-aged students with severe basic skills needs who are not enrolled in schools or students in settings other than the regular school facilities.

Many of the students with the greatest need for basic skills improvement have either dropped out of school or are relatively suspicious of assistance provided through regular school settings. Districts with the initiative and ability to assist these students should be left in no doubt as to the legality of their efforts. However, since the needs within schools are very high, and not all districts are willing or able to undertake innovative projects outside the school setting, no district should be forced to do so.

Technical Assistance

> Provision: A specified percentage of each state's allocation will be reserved for administrative and other state expenses. Of this money, 50% may be used to select, train, and fund field teams that will make periodic site visits to operating local projects for the purpose of giving technical assistance to improve project designs and evaluation techniques.

Local project design and personnel training are two of the tasks that are traditionally and, we believe, inappropriately assigned to national level technical assistance. This item sets aside a portion of the state's administrative monies to provide these services and to provide them in a way that makes sense--by visiting the sites. Our hope is that states will not simply appoint bureaucrats to do this, but will seek out members of the academic and applied educational communities.

Evaluation

> Provision: States will provide evaluation in the form of longitudinal assessment of the success of local projects and of achievement of those students who have participated in the basic skills projects created under this program.

One-year treatments are of very little long-term use to students, and a single-year evaluation can distort the understanding of project achievement at both local and national levels.

Teacher associations and unions will almost certainly have conflicting feelings about Proposal B. To the extent that it pumps more federal money into the local school systems, it will be supported. To the extent that it increases the load of testing, or moves toward a system of teacher accountability, it will be vigorously opposed. We believe that this strategy need not make either testing or accountability more burdensome on the ordinary teacher and could actually reduce present pressures. However, it would be naive to expect teachers to take our word for this.

Most Title I projects now call for pre- and posttesting. It is this pattern that focuses on the individual teacher. As we have discussed in other portions of this report, we believe that this within-year focus is inappropriate and unproductive.

Moving to once-yearly testing for the purposes of assessing students should do a lot to relieve the pressure on individual teachers and to refocus districts and schools on the importance of examining a student's continuing school experience.

Proposal B also provides for both longitudinal assessment of participants and, where applicable and practical, longitudinal treatment. Both of these features will have the effect of focusing attention on the ability of the school as a whole rather than that of any single teacher.

Inservice Activities

> Provision: District and school funds may be spent for providing inservice or retraining activities to project staff and may include those regular classroom teachers who teach substantial numbers of project students subjects requiring a significant competence in basic skills.

For a discussion of this inservice provision, see the pertinent provision in the previous chapter.

> Provision: Two additional appropriations will be made to assist the necessary teacher training. First, an appropriation is to be added to the budget of the Education Division for the purpose of establishing projects of applied research, demonstration, and dissemination on the inservice and retraining activities of teachers in secondary and compensatory education projects.
>
> Second, an appropriation is to be added to the budget of the Education Division for the purpose of establishing grants to a selected number of schools or departments of education within IHEs in order to upgrade their programs in the area of basic skills instruction for intermediate and secondary schools.

Once money is provided to local projects, the skills, confidence, and enthusiasm of project teachers will be the most crucial factor in project success. These two additional appropriations would provide the basis for building teacher skills both directly, through the development and dissemination of models of inservice training for LEA use, and indirectly, by strengthening the capacity of IHEs to serve the teacher community. However, there is little argument that teacher education systems are in a state of disarray at the present time and are still producing too many entering teachers for the current job market. Under these circumstances it would be wasteful and counterproductive to provide across-the-board funding. Instead, money is provided to a selection of those IHEs that are best equipped to be of immediate assistance to LEAs.

XII PROPOSAL C: A BLOC GRANT TO STATES

The following chapter outlines a bloc grant support program to assist adolescent basic skills. The reader should bear in mind that this argument represents a hypothetical policy position, not an indisputable statement of research findings. Other positions are presented in Chapters X, XI, and XIII.

Rationale

Our third proposal proceeds from the assumptions that state and local political commitment is a prime requirement for effective adolescent basic skills reform; that the best solutions are those shaped by the conditions, values, and enthusiasms of the state and local school systems; and that the required solutions must be at least innovative and perhaps radical.

Recent studies stress the importance of beginning change through the involvement of teachers, administrators, and the public if innovations are to be installed and are to survive. Yet, many believe that the traditional categorical federal program leaves little room for these actors or for building organizations that can support innovative efforts. If the commitment, innovation, and resources of communities and states are not mobilized in the cause of basic skills, any change the federal level can effect will be merely cosmetic.* One way to help secure this involvement is to place the responsibility for program development and administration firmly with the states from the beginning. State level agencies are more effective at securing the involvement of school and community leaders because they are geographically closer, more responsive to local pressures and needs, and more sensitive to the social and fiscal realities that do much to determine how and when local change can be achieved.

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*Obviously, those who are most enthusiastic about the present Title I efforts will take issue strongly with this interpretation. However, there is marked feeling in some states that this description is accurate. This proposal is designed to represent their views.

One of the greatest difficulties of federal categorical programs is the necessity they create to treat all states and localities alike. Thus a program must have the same structure, organization, and procedures in every state. And despite legislative language to the contrary, regulations often impose an unmistakable blandness on the local educational projects in which target populations participate. This uniformity implies that there is one plan that is effective for all students and congruent with all state political cultures and finance systems; experience contradicts this. Uniform policies also imply that the federal government is better able to design and administer programs than are state organizations, and this too is open to question.

When ESEA was passed on in the mid-60s, its form of strong central control was justified on the basis that SEAs were not aware of the special needs of certain target groups and lacked the expertise and organization needed to deal with special problems once they had been recognized. These are no longer sound justifications. The catalogue of state special programs increases every year and in some states exceeds the federal effort. It is no longer reasonable to presume that states will not and cannot construct effective programs.

Federal assistance is still needed to support state efforts and to assure that an appropriate level of financial and technical resources is available. However, this proposal assumes that program uniformity is not an unavoidable concomitant of federal support.

Program Description

A program to implement this rationale would be characterized by the combination of federal money with state choice of plan and assumption of administration. The federal level would provide the base money in the form of a bloc grant, distributing it in some fair and equitable manner: for instance, by a formula based either on an estimate of target group size or on a state's demonstrated willingness to support education.

Participating states would use this money to construct or strengthen a program to improve the basic skills of intermediate and secondary students. Determining the form of these programs and selection of participating districts, schools, and students would be left to the states. They would be encouraged to design programs that were consistent with their political cultures and financial mechanisms, appropriate to the existing level of effort in basic skills for adolescents, and, above all, reflected local goals and capitalized on the involvement of local actors. The result would be an array of state level programs that differed among themselves substantially in form and procedures, but which held in common the goal of improving the basic skills of intermediate and secondary students.

Responsibility for running the programs, for evaluation, and for accounting would rest entirely with the states. This means that local districts might be subject to review by appropriate state procedures, but would not have to abide by a single set of expenditure standards enforced by federal auditors. Federal accounting would be used only to determine that a state had used the federal grant for the purpose described in its application.

This strategy avoids the known problems of intrusive federal presence in local schools and the unfortunate effects of extensive and uniform federal regulations and guidelines. It does so at the risk of producing some state and local programs that do not conform to present standards of proper expenditure. Experience tells us that, however strict may be the rules of a categorical program, some leakage and waste occurs. In essence, this proposal is willing to risk some leakage and waste against the perceived benefits of state and local responsibility and initiative, as well as the ability of states to direct their own efforts in behalf of special needs.

Issues and Choices

The type of program suggested above raises a number of questions, including those discussed below.

Issue: Disposing of a single pattern of program administration in all states enhances the possibility of dramatic misuse of funds. The looser format of this program means that what regulations it has will be less threatening to states and localities, particularly in the absence of direct federal audit of local projects.

Comment: Because there is probably little that can be done to reduce this risk without doing serious damage to the intent and structure of the program, the risk will have to be accepted. However, with fewer rules to follow, oversight of essentials should be improved, and many federal grant and revenue-sharing programs of similar construction, have worked this way for many years.

Issue: The relative paucity of after-the-fact controls (e.g., regulations, penalties) places a greater administrative burden on the submission of acceptable plans by each state. This might delay the initial operation of the program somewhat.

Comment: The following discussion tries to anticipate in some detail the preparation that would need to be done by states. The actual delay would vary greatly from state to state, depending on the type of program a state wished to design and on whether the federal grant was to be used for a new effort or to strengthen an existing state program. Even in those states encountering some delay, this initial planning time should be more than worth the subsequent confusion that it would prevent.

Issue: The rationale for this program holds that states can and should take responsibility for the improvement of basic skills and are capable of organizing such efforts. It also holds that local initiative is a prime requisite of lasting change. Yet the program does not follow these premises to their obvious conclusion: that states and localities should pay--or at least share--the bills.

Comment: Ideally this should be a matching-grant program rather than a bloc grant. However, repeated efforts to devise a feasible matching-grant formula were unsuccessful. A match based on state funds alone inevitably favored those states that assumed greater shares of school finance and created the unintentional consequence of driving states toward full state assumption.

A match based on combined state and local funds proved equally troublesome. We could devise no dependable way to separate money spent on basic skills from money spent on other school tasks. That being the case, we faced the equally undesirable alternative of artificially creating an accounting of funds through enforcement of project designs that strictly isolated project activities from the regular curriculum.

> Finally, in the case of either state-only or state-plus-local matches an unintended consequence was to create an incentive for increasing total educational expenditures by all government levels. The merits of greatly increased expenditures may be debated, but in any event seemed tangential to the goals of this study.

Detailed Program Outline and Discussion

> Provision: The basic form of a program to implement this proposal would be a federal-to-state bloc grant. The formula for this distribution should be designed to distribute funds fairly and equitably among participating states.

There are any number of ways to determine such a formula, two of which will be discussed here. The first is to use a formula of the type introduced for federal-to-state distribution in Proposal B (Chapter XI). That formula is based on state population, modified in such a way as to reflect the fact that some states have a greater chance of having large populations of low-achieving adolescents, although all states face the problem to some degree. The formula suggests modifying state population by a weighted distribution of family income for each state, thus giving greatest attention to the factors of state size and estimation need.

An alternative to this formula is to base distribution on the willingness and ability of states to finance education in general and secondary education in particular.* The wealth of states differs greatly, and there is also variation in the tax effort that individual states and localities make in support of education. These are both legitimate factors in the determination of a fair and appropriate level of federal support to individual states. Starting from this premise, we can compose a scale of federal contribution along the following lines:

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*Ideally, this should be "state support of basic skills education at the secondary level," but, as mentioned above, that degree of precision in school budgeting is illusory.

(1) Each participating state would submit its total state and local expenditures on secondary education.

(2) This total dollar amount would be divided by state population to determine the per capita expenditure on secondary education.

(3) Per capita expenditures would then be divided by the per capita wealth of the state to produce an adjusted per capita state effort for secondary education.

(4) Finally, adjusted state effort would determine a federal contribution according to a sliding scale, such that greater state effort would elicit larger federal contributions, both absolutely and relatively.*

Each of the two formulas is an attempt to devise a sensible and even-handed distribution, and either would suit the purposes of this proposal. We slightly favor the second formula, since it reflects the commitment and effort of states and localities, some of which is devoted to basic skills even in the worst of circumstances and to that extent responds to the concern that in order to tap state initiative there should be a reflection of state effort in the allocation.

A formula could even be devised that included all the factors of both formulas: wealth, effort, size, and estimated need. Although such a formula would be complicated, its data requirements are not excessive, and it could probably be handled in a program that reduced other duties of the federal administration to a bare minimum.

> Provision: Grants to states under this program would be used for establishing, strengthening, or upgrading state level programs for improving the basic skills of low-achieving students in the intermediate and secondary grades.

The central purpose of this program is to stimulate state efforts on behalf of basic skills in the upper grades. These efforts should be tailored to states' political and financial systems and to the level and type of existing state efforts. This means that there will be little uniformity among state programs. However, we can envision and describe at least three broad patterns into which most state programs would fall.

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*This formula is similar to "district power equalization" plans used in state school finance reform models.

(1) Some states have already decided that the most appropriate and useful way to meet obligations to special needs groups is through a weighted distribution of state monies. This plan has been used most in states with total or nearly total state assumption of school finances.

The present distribution of money in Florida is an example of this type of state program. A state choosing this method of using its federal grant would probably need a statewide achievement test of some sort to provide the data needed for accurate weighting and distribution of funds from state to district levels; an acceptable alternative might be to use a weighted distribution of local family income. To account for federal monies, a requirement would need to be established that, for example, 90% of the money distributed under this weighting must be shown to have been used for the students defined by the weighting criterion.

(2) A second type of state program could be built on the model of a categorical program. States are becoming increasingly adept at designing and administering this type of program. The choice of student or district eligibility criteria would be left to the states, subject to approval by the Commissioner.

Among states choosing this general type of program, we could anticipate such variations in form as a program for adolescents resembling the current "Chapter Three" effort in Michigan, a state compensatory education program for the primary grades, or the California proposal for the Reform of Intermediate and Secondary Education. It would also be a useful form for such states as Arizona, which already has well-developed informal programs for basic skills, but until now has been hampered by the lack of a mechanism of formal financial support. All or most states choosing programs of the categorical model would probably require LEAs to submit a yearly plan and an application for state-to-local distribution, but this would not be a uniform federal requirement.

(3) States with a distaste for either of the first two types of program might prefer a straight grant to LEAs by competitive application, similar to the present state level administration of Title III.

This would be most appropriate for the many states making their first efforts on behalf of adolescent basic skills. Sensible first steps would include a controlled number of design and demonstration projects, personnel training, materials development, and so on, which are most easily accommodated by a direct grant to selected LEAs. This form could also be used by states having more advanced programs to supplement existing efforts in particular ways that were not previously possible, such as providing for the longitudinal evaluation of students or the comparative assessment of a few local designs. The straight grant would also be appropriate for such states as Vermont with a strong tradition of mutual assistance and informal coalitions of LEAs.

> Provision: Any state wishing to participate would submit to the Commissioner a plan describing the state program for which the grant money would be used. This state plan would need to include the following elements:
>
> - A description of the state program for adolescent basic skills to be established, strengthened, or upgraded by the federal grant. If an existing program is to be improved, a description of its current procedures and funding, if any, would be required, along with evaluations of its accomplishments to date.
> - A description of the method of distributing money to LEAs. If a competitive application is to be used, the general lines of deciding among applications should be described. If a criterion distribution is to be used, a description will be needed of the allocation formula and of the data-base to be used in determining local shares.
> - A plan for fiscal control and accounting of the federal money appropriate to the specific basic skills program described above. If state or local monies are to be used in conjunction with the federal grant, the procedures for their accounting control should also be described.
> - Adequate proof and assurances that state and local funds that are currently provided for the same or similar purposes will continue to be provided, and that such future funds will not be withheld on condition of the availability of the federal grant.
> - Adequate proof and assurances that other federal funds provided for the same or similar purposes will not be displaced to other uses and will be coordinated with this federal grant as much as possible. In particular,

> states will need to establish that the advent of this program has reduced neither the participation of intermediate and secondary students in Title I nor the proportion of state or Title I funds used for these students.

At first glance this is a rather lengthy list of components for a state plan, but it is relatively modest by the standard of comparison with other current federal programs. It should also be remembered that this plan accounts for the bulk of the state's paperwork responsibility to the federal level, and that it substitutes for a number of after-the-fact controls.

> Provision: The Commissioner will be responsible for approving state plans and for providing assistance as necessary to the states in developing these plans.

This program should have only a bare minimum of formal federal regulations and a maximum of flexibility. Approval of state plans by the Commissioner provides an informal and flexible opportunity for negotiating state plans so that they are compatible with both state circumstances and the broad federal goal of improved basic skills. The inherent politicization of the negotiation of plans is perceived here as a positive good rather than an evil to be prevented by the imposition of detailed rules.*

These duties will necessarily involve greater effort and time by the Commissioner and OE staff at the outset than is the case in many other federal programs. Resources should be set aside for supporting this technical assistance to states in developing acceptable plans.

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*There is a dilemma here. Some researchers point out that bureaucracies cannot operate without detailed regulation, citing Title VI of the Civil Rights Act. Equally perceptive researchers point out that bureaucracies can barely operate anyway and that detailed regulations eliminate any possibility of achieving the delicate balances needed for successful policy. In this proposal we incline toward the latter interpretation and refer readers holding the opposite view to Proposals A and B.

> Provision: Each SEA will be responsible for assuring that federal grant money is being used for the purposes described and approved in the state's application. This will be accomplished through on-site visits by SEA personnel to local projects to determine whether a program of the type described in state and local applications is in operation, is of a size and scope consistent with the application, and is serving pupil identification procedures as previously described.

One of the central objectives of this proposal is to relieve local projects of intrusion by federal auditors and of the detailed accounting for funds that is impossible given the realities of school organization and district accounting practices. Thus, we suggest that the duty of the states is confined to seeing that projects are actually installed by LEAs receiving grants, and that these projects are generally consistent with the plans previously submitted by both the LEA and the SEA.

> Provision: Federal monitoring will be undertaken to determine that participating states have designed and are using a system of local oversight consistent with the type of program that state has chosen.

This is the other side of the coin; the responsibility of federal auditors is limited to seeing that states are indeed conducting their monitoring functions. This might at times involve spot checks with local districts to determine that state monitors had in fact visited the locations they reported and carried out the activities they cited. In this case, the federal presence would not be passing judgment on the district but merely using its information to check on the state.

This type of monitoring system is not as radically new as it may first appear to educators, since it has been used for many years in such federal programs as Health and Safety Enforcement and Grain Inspection.

> Provision: Each state participating in this program would submit a biannual report of achievements resulting from this grant and unresolved problems. This report will include the on-site reviews of local projects conducted by state authorities during this period.

The fact that the yearly evaluation and reporting requirements of some federal programs have become so enormously burdensome can lead to the establishment of almost permanent bureaucracies to produce the required paperwork, as well as another bureaucracy at the federal level to read them. Since, under this program, evaluation is a function for and at the discretion of the state level, federal reports should be kept to a bare minimum. We believe that for a program of this design biannual reporting is adequate.

XIII PROPOSAL D: DIRECT GRANTS TO DISTRICTS FOR ASSISTING CHANGE

The following argument can be made to advocate a federally sponsored program of applied research, training, project demonstration, and dissemination. Such a program could be instituted alone or, preferably, in connection with any of the preceding proposals. As with the preceding proposals in Chapters X-XII, the reader should bear in mind that this, like all policy positions, is a strategic interpretation of research, experience, and political climate.

Rationale

When federal money pays all the bills, local budgets do not--in fact cannot--accept the responsibility for incorporating real changes in the school process. When federal money disappears, so does the project. In addition, categorical programs may sometimes actually hinder change. Program regulations lead districts to hire new personnel rather than develop the skills and attitudes of existing staff, while federal money provides for the operating costs of programs that districts cannot afford to run with their own funds. The federal role needed in this case is not one of massive and lasting financial support, but one combining persuasive leadership with practical technical assistance during the first few years of school change.

A second pitfall of federal efforts has been the tendency to confuse the need for more information (experimental research) with the desire to assist districts in changing their practices (program establishment and support). Both needs--for research and for change--are legitimate, but they make quite different demands on districts and are necessarily conducted in different ways. These two functions should be separated and treated appropriately, instead of trying to do two things at once, making the local district the loser. In the preceding proposals we have outlined ways of supporting the establishment of programs. This proposal is designed to address the needs of districts in preparing for change.

From this perspective, the federal level faces several tasks in the improvement of adolescent basic skills. One is to locate and document existing projects for basic skills improvement and to establish contact between schools that already have such projects and districts that are only beginning to develop them.

Another task is to provide the wherewithal for districts to adopt, adapt, and install practices to assist older students in improving basic skills. This requires more than money. Financial and nonfinancial supports need to be provided together if old practices are to be replaced anywhere but on paper. Several recent studies of dissemination programs provide considerable insight into the types of assistance that districts need and want, and we should build on this valuable work.

The final task is to generate and study additional designs that thus far have not found a congenial atmosphere for experimentation and evaluation of their effects. Several strategies for assisting adolescents (e.g., certain work/school plans, competency graduation, cross-age tutoring) have been described in theory but have not been widely tried. Until they are, we cannot know how their effects compare with those of other, more familiar models.

The federal government has solved similar problems before and has made several reasonably successful attempts at nurturing local school change (e.g., Title III, the National Diffusion Network, and Program Implementation Packages). Unfortunately, these efforts have usually been piecemeal, with little opportunity to apply the experience of one program to the improvement of another. What is required here is a coordinated program of technical assistance that combines many of the elements and much of the acquired wisdom of previous federal ventures.

Program Description

There are four basic components to the proposed program. The first would identify districts (schools) with existing, well-established programs and would provide support to someone in the district who would document such central features of the program as its organization, curriculum, planning process, and inservice needs, as well as producing materials that would be useful to other districts. This grant would be for approximately one year. Following that, one or more individuals in that district could be supported for the purpose of supplying consultation and technical assistance to other districts wishing to establish a program along the lines of that design. (About 10% of all funds would go to this component.)

The second component would assist LEAs in initiating and establishing lasting changes in intermediate and secondary schools that use local money to help improve basic skills. Districts that did not have an operating program could apply for this money and would be expected to pay operating costs out of state and local funds. Federal money would be provided for such startup features as planning, teacher inservice training, selection and development of materials, studying and visiting other projects, and various tasks that are not part of the long-term operating expenses. Participation would take place in three stages: one year of planning (the proposal development grant), two years of installation (the installation grant), and an additional two years of adjustment at lower levels of support (the transfer grant). Funding proportions should be about 1:2:1 for these stages. Projects would be funded by competitive application according to criteria such as those suggested later in this chapter. (About 65% of all funds would go to this component.)

The third component would identify highly innovative, high-risk designs that had not yet been tried. The purpose here would be purely experimental and evaluative. LEAs could apply to be assigned such a design and receive a grant for full operating support of the design for two and a half years. Evaluation would be continuous and contracted for with an outside agency. (About 15% of all funds would go to this component.)

The fourth component would provide funds to a network of technical assistance agents who would have several functions: to assist districts with the application processes; to seek out and assist districts that have an overwhelming need for such programs but would not ordinarily apply by themselves or be likely to win competitive applications; to act as brokers for districts that are searching for a design that fits their general needs; and to help districts contact, obtain, and use technical assistance from the many sources available to them. (About 10% of all funds would go to this component.

Issues and Choices

Issues: This kind of program typically reaches only the "leading edge" districts that are familiar with and adept at the federal grantsmanship game and already have more than their share of innovative programs and personnel. This kind of program typically misses districts under the greatest stress.

Comment: This is an inherent dilemma. Spending funds with maximum efficiency means concentrating on districts that are most willing and able to change. Because these districts are leaders in the educational system, the changes they make will influence other, more timid districts to follow their example. Focusing money on the very worst situations, those that need the most help, will be much more expensive and time-consuming and will run substantially higher risks of failure in individual cases, but is obviously more to the point.

The program described in the following section attempts to deal with this issue by constructing slightly different methods of program access and assistance for the two type of districts. We believe that this is an improvement on the usual undifferentiated application method, but we recognize that it does not entirely solve the problem.

Issue: The federal government has sponsored many similar research and development programs in the past, but they soon lose their appeal in Congress and are killed by small, repeated budget cuts. If we believe that lack of basic skills is a serious problem, is this a serious answer?

Comment: True, the federal offices are crowded with the remnants of programs that have lost their appeal. It is an unfortunate political reality that high-cost support programs have more political appeal than low-cost, change-agent programs, because they garner larger constituencies. However, there are still some sound reasons for using this program form for the current problem, if one genuinely believes that local districts must themselves achieve real change. Existing programs are unable to help secondary schools and uninterested in doing so, since it would offend the constituencies they do have.

The ideal solution might be to dissolve several current R&D programs in favor of this one and make a clean start. A strong case could be made for combining the resources of ESEA Title IVc and old Title VIII, Right to Read, the National Reading Improvement Program, and the Teacher Corps under the single administration of the proposal suggested here, to produce a strong program focused on intermediate and secondary basic skills with enough funding to make a substantial impact on the problem.

Detailed Program Outline and Discussion

Part 1: Demonstration and Development Grants

Provision: The program office will search out and invite applications from districts that are currently operating programs of basic skills improvement for intermediate or secondary students.

- During the first year of LEA application, districts would be funded to produce documentation and materials relating to the existing district program that would be useful to staff and administrators in other districts wishing to establish an identical or similar program.

The federal government has been in the business of locating sound projects for many years, under efforts to designate promising or exemplary programs, produce dissemination packages (e.g., Program Implementation Packages) or fund demonstrator districts (e.g., through Title III). Most of the efforts have been quite successful and represent some of the most widely acknowledged benefits of educational research dollars. But in the past, these efforts have been consistently oriented toward the elementary grades. A special effort will be needed to produce an adequate array of designs for the intermediate and secondary grades. In this case, however, the federal level is experienced in how to get what it needs and simply has to change its focus a little.

- The Commissioner will establish criteria for selection among applications to this part of the program.

Assuming that there will be more applicants than money, some means must be constructed for choosing among applicant districts; we suggest criteria similar to those now used for Developer-Demonstration projects in what was previously Title III, Section 306. These include the comprehensiveness of the design, the degree of innovativeness, the cost and availability of the components necessary to make the project run smoothly in other districts, and the availability of statistically significant evidence that the project design is effective at improving basic skills for adolescents.

- Subsequently, LEAs with operating, documented projects could apply for funding to support one or more persons who would provide technical assistance to other LEAs planning to adopt their design or use their materials.

In the early years of federal education dissemination efforts, it was confidently believed that if a good project could be perfectly packaged, then new districts could install an identical model based entirely on written directions. Occasionally, this has happened. More frequently, however, pamphlets alone proved insufficient, and dissemination programs have moved more directly toward strategies that supplement written materials with collegial support and assistance. The common sense and demonstrated success of this approach recommends it for use here.

- Applications for districts as discussed above should be renewable at least every two years.

As the enterprise proceeds, new projects will be added, and some old ones will be shown to be unpopular or to need retooling. This part of the program is not designed to provide long-term support to a large number of districts, but to provide funding to a few districts for the purpose of helping others to adopt good project designs. (Approximately 10% of the total program budget should be allocated for Part 1.)

Part 2: Grants for Establishing New Programs of Basic Skills

Recent studies of the process of implementing change in schools indicate that change proceeds through several fairly well-defined stages. The process described here and below is an attempt to tailor federal assistance to the differing needs of these stages, to provide the level of money and type of nonmonetary assistance appropriate to each stage, and to provide periodic reassessment points instead of irrevocably committing federal funds for several years at a time.

> Provision: LEAs may apply for a Proposal Development (PD) grant for one year of funding to be used for planning a project to be established the following year. Money could be used, as needed, for (1) observing operating projects, (2) project selection and planning, (3) planning and initiating inservice training, and (4) selecting a liaison.

Studies of local change processes agree that thorough planning is essential to establishing both the organization and the morale of new projects, and that sound planning rarely takes place unless it is specifically provided for. We are convinced that long-term planning is particularly needed by projects in the intermediate and secondary grades.

- PD grants would be available to three categories of LEAs: (1) those high-stress districts identified and contacted by the liaison agents described below, which are presumed to need substantially more planning time and assistance; (2) LEAs that had applied for but not received funding for an implementation grant, and which were felt to show unusual promise but need additional planning; and (3) LEAs other than those of the first two categories that apply jointly with a regional lab, center, IHE, or similar nonprofit enterprise and that show unusual need and demonstrate that they intend to subsequently implement a highly innovative project design.

One frequently cited problem with federal grant programs is that the pressures of proposal deadlines often leads to the distribution of money according to grantsmanship rather than merit or need. This one-year planning grant evens out competition among districts with respect to their opportunity to plan well and to prepare a good proposal for the subsequent installation grant, and provides a way to reach some of the very high need districts that rarely can compete successfully for federal awards.

The subject of liaison agents will be discussed under Part 4 below.

- The Commissioner will establish criteria for the definition and selection of high-stress districts eligible under the first category described above.

As always, some selection mechanism is needed. We suggest criteria similar to the following: districts or schools with critically low achievement among students, as revealed in chronically low and belowexpectation scores on statewide assessment measures; high concentrations of ethnic minorities; high and sustained dropout rates.

Provision: Applications for PD grants should include:

- Evidence that the district is willing and able to support the operating costs of a project in the following year, or, in unusual circumstances, that an adequate source of independent funding is assured.
- A description of how school site and district personnel are to be involved in the planning and selection process.
- A description of the process that will be used to search for and develop a project design.

If Proposal D is used in conjunction with a support program, the requirement of assured district funding is irrelevant. However, if the proposal is not used in conjunction with a support program, then there is no point in planning a program that the district (no matter how needy) cannot pay for implementing. Thus, even districts applying for PD grants will need to demonstrate the likelihood that money will be available to pay for subsequent stages.

This initial application should be kept simple. However, since the involvement of school site personnel from the very beginning seems to be a critical element of eventual project success, applicants should specify how this involvement is to be obtained.

Provision: At the end of the PD grant year, LEAs will prepare a brief report accounting for the expenditure of funds.

Districts that are interested in proceeding to the next stage, described below, will have used their PD grants to produce the documentation required for the next step.

Provision: LEAs may apply for a two-year installation grant. This application must include the following elements:

- A description of the project to be installed, including curriculum and pedagogy, staff organization, and student selection and assessment.
- The designation of a liaison outside the district who will provide technical assistance to the project.

- A plan for appropriate and coordinated inservice training to be provided to the project staff, and inservice, staff meetings, or other appropriate activities to inform, train, and involve the remainder of the school staff.
- A plan for the acquisition, adaptation, or development of materials and equipment needed for the project.
- A detailed estimate of the total cost per pupil of the project, and description of resources (local and state) to be used to meet these costs.
- If the design is not based on an existing model from Part 1, the LEA will indicate a source of outside technical assistance for the two years of the installation grant. Such technical assistance might come from a local IHE, from the Title IV network, or from projects developed and designated under the auspices of other federal programs. The agency selected would submit a concurrent (not joint) application to fund this activity.
- The Commissioner will establish criteria for selection from among applicants to this part of the program. The final selection will be made by a panel of outside experts.

This detailed second application is the real end product of the PD grant. By this point, major decisions should all have been made and resources put in place to meet the program's operating needs. However, districts may apply for installation grants directly, without participating in the earlier PD stage. A detailed budget is necessary to establish what expenses are to be paid with the implementation grant and what is to be paid for out of ordinary district funds.

As usual, the problem arises of how to choose among too many applicants and how to justify such choices. We suggest that the criteria for this selection include at least: the extent to which the LEA plan is a significant departure from present practices in that district; the extent to which the plan makes changes that can be incorporated into the ordinary curriculum and organization of the schools in that district; the extent to which the plan calls for the involvement and use of existing faculty in the operation of the program; the extent to which the design shows evidence of a careful match between the social, cognitive, and emotional characteristics of the student participants and the process chosen for correcting and improving basic skills competencies; and the extent to which the design incorporates a plan for the longitudinal evaluation of student participants and project achievements.

> Provision: Implementation grants may be used to pay extraordinary costs incurred during the first two years of program installation. These include special inservice activities for project staff, regular planning and assessment meetings on a frequent schedule, the costs of technical assistance by the liaison, the costs of adapting and developing project materials, and such other costs as can be shown to be especially incident to the initiation of a project, rather than its long-term operation.

Inevitably there is some ambiguity about separating costs. Nevertheless, a strong case can be made that the activities listed above are at least substantially more expensive during the first two years of operation than afterward. Continuous planning, adaptation, and inservice activity seem particularly important to the eventual incorporation of new practices into district procedures and are therefore given differential support. It is the intention of this program, however, that the basic operating costs of programs come from district budgets so that they can be supported after the federal funding has ceased. This means that per pupil expenditures will need to remain stable in constant dollars before, during, and after federal grants. Only in this way will districts achieve the appropriate reorganization of their own monies.

> Provision: Upon completing a two-year implementation grant, a final report will be submitted, including an accounting of funds and a longitudinal evaluation of project participants.
>
> Provision: During the third and final stage of establishing a program, LEAs may apply for a two-year transfer grant. Applications for this grant must include:
>
> - A description of the project as it existed at the completion of the implementation grant, including curriculum, organization, and service components.
> - A description of the project components to be used for the next two years.

Experience and research indicate that all districts make some gradual adaptations of their original plans and models. If this does not happen, it is unlikely to fit the district's circumstances well enough to survive the withdrawal of active federal support. On the other hand, if too much adaptation occurs, there is a high risk that the new practices have simply been co-opted by the old habits. This description of the project, required within this application, provides a checkpoint for both the district and the federal funding agency for assessing whether an appropriate balance is being achieved and for changing the course of the project, if necessary, or halting federal support altogether.

- A description of teacher inservice, planning, materials acquisition, and technical assistance required during the two years of the transfer grant.

It is presumed that these expenses should be considerably lower than they were during the first two-year installation grant, but that some special activity in these areas will still be required. These are the costs the transfer grant should assume:

- A budget in sufficient detail to demonstrate how the district will support the general operating costs of the program during the next two years and explaining any major differences in total available school budgets.

Provision: The Commissioner will establish criteria for approval of applications for transfer grants. Particular weight will be given to whether the implementation grant has resulted in an innovative and smoothly operating program and to evidence of fiscal responsibility during the previous grant period.

Provision: Federal auditing will be conducted in order to ascertain that LEAs receiving any of the various types of grants described above have in fact established programs of assistance to the development of adolescents' basic skills in the schools or other sites described in the application or of a magnitude and scope consistent with the plan described in the application.

One of the explicit objectives of this program is to encourage districts to incorporate these basic skills projects into their regular practices and to fund them with regular state and local funds. Detailed auditing to discover and penalize comingling is inappropriate to that extent. The oversight of federal autidors is therefore confined to determining that projects are in the right places, are actually conducting the activities described in the plan, and are giving assistance to approximately the same number of students estimated in the plan.

Part 3: Grants for Experimental Projects in Local Districts

> Provision: The national office will also establish and evaluate, for a limited experimental period, a small number of untried designs of unusual innovative potential for improving the basic skills of adolescents.

The research literature contains accounts of several unusual ways of assisting adolescents. These tend to be designs that make relatively high demands on some aspect(s) of school organization, habits, or attitudes, and that therefore constitute high risks for the first district to adopt such a design. Many of these designs have sufficient face value to merit a trial, so that their benefits and difficulties can be discovered. This is the legitimate research function that needs to be carried out at the federal level. Three types of contracts could be made for this purpose.

> Provision: IHEs or research institutions could apply for a one-year grant to specify and develop a highly innovative design. This design would include a description of:
>
> - The theory or theories on which the design is premised.
> - The operating components of the design, including its management, staff organization and training, selection of participants, curriculum or participant activities, and appropriate evaluation criteria.
> - A detailed budget estimate of the yearly operating costs for implementing the design.

The purpose of these grants would be to produce a blueprint for implementation of the design, constructed as a thorough integration of theory and operation; these blueprints should be more thoroughly researched and thought through than the designs that LEAs generate under Part 2 (when not adopting an existing design from Part 1). In a few cases, such documentation already exists* and this step could be foregone.

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*For example, NIE has already sponsored the development of detailed plans for such innovations as cross-age tutoring projects and the Century School as part of its broader study of Compensatory Education.

Provision: In response to an RFP describing a design as specified above, LEAs may apply for two-year grants to install a design.

- These grants would be of sufficient size to pay the full operating costs of the design for a two-year period, exclusive of the costs of evaluation.

In such experimental situations, the district is providing a service to the federal research process, rather than the opposite. What is needed is a home for these experimental projects. Because they are experimental and entail rather high risks, and because they are not intended to be permanent additions to the local school process, the full costs of such experiments should be borne by the federal level. If these designs in fact make higher demands on the district than would less innovative, and familiar designs, districts will show a certain prudent hesitancy to adopt them, even for a two-year trial period, and will need a rather considerable incentive to do so. The full funding provides most of that incentive.

- As part of the application, LEAs will state whether specific aspects of the design or its implementation imply or create conflicts with sections of the General Education Provisions Act or with the specific regulations of other federal programs operating concurrently in the district or school site.
- The Commissioner will be empowered to grant waivers as necessary to these regulations and provisions in order to secure the experimental establishment of the design for that two-year period.

Because of their innovative nature, these designs are more likely to come into conflict with certain provisions and regulations of other programs than are most federally funded implementations. They might, for example, conflict with instructions about the isolation or nonisolation of students, coordination with other federal funds, concentration of funds, or even supplanting.* However, the designs are intended to provide models for states and localities that wish to sponsor, with their own funds, a situation that generates few if any such conflicts. Therefore, it is reasonable to create an experimental context that approximates unfettered district and state operations, rather than the far more restricted environment of federally funded projects.

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*Particularly where issues of race, sex, and classification are involved there may be constitutional as well as statutory prohibitions, which, of course, cannot be dissolved.

- On termination of the grant, the LEA may apply for the acquisition of materials and capital equipment purchased for the trial implementation without repurchase cost, up to a percentage limit of total funding to be specified by regulations.

These experiments are not intended for long-term support but may leave behind them much that is of value to the district. This is a modest incentive and repayment for the district's effort and support of the design.

> Provision: IHEs or appropriate independent institutions of educational research may apply separately for contracts to design, carry out, and analyze the longitudinal evaluation of projects implemented under this part of the program.

To get evaluations of the highest technical quality and greatest objectivity, it will be necessary to separate evaluation from the other implementation components to be carried out by the district. We suggest that evaluations be contracted for separately.

Part 4: Grants to Liaison Agents

> Provision: The national office will select and provide funds to a number of individuals, to be located throughout the country, who will perform the following liaison tasks:

- Assist LEAs applying under Part 2 in the mechanics of the successive applications.

As mentioned above, grantsmanship plays a large role in determining which districts receive contract awards, regardless of other qualifications. In addition to the measures taken above, this part of the program provides some outside professional assistance with applications, helping districts to understand what is required of them, to understand the law and regulations involved, and to generally assist throughout the tedious application process.

- Assist LEAs during the proposal development grant period in the location and selection of a basic model that fits the needs and resources of the district.

This part of the job is similar to the national diffusion network facilitator. The individual acts as a type of broker between the documented models and the districts searching for a design. She/he must be thoroughly acquainted not only with the models developed under Part 1 of this program, but also with models developed under such other programs as ESEA Title III, Program Implementation Packages, the Joint Review Panel, ESEA Title IV, and any of the other federal search and development efforts.

- Seek out districts that could and should benefit from participation in part 2 of this program but which for whatever reasons, would not otherwise participate.

As was mentioned previously, experimental and dissemination programs have tended to overlook the very difficult districts that are under the greatest strain. Often these are in minority communities, in cities with endemic fiscal difficulties, or in isolated rural settings with little sophistication regarding federal programs. Using liaison agents to seek out and encourage some of these districts to participate will not solve the problem entirely, but should help to achieve a somewhat improved balance of characteristics among participating districts.

- Assist districts participating under Part 2 to establish contact with such sources of technical assistance as the Title IV research and development network or local universities that can provide outside support, should a district not choose an established and documented model with its accompanying technical assistant.

We expect that for a variety of reasons, some districts will not want to establish a project conforming to one of the models in Part 1, but will prefer to develop their own. In this case, there will still be a need for outside technical assistance to get them over the difficulties that will inevitably arise during the two years of installation grant. The individuals described in this part of the program will serve as liaisons between such districts and the existing resources for appropriate technical assistance.

Section 4

COMPARISON OF COSTS AND ALLOCATION FORMULAS

XIV COMPARATIVE COSTS OF PROPOSALS A, B, C, AND D

Cost is a crucial factor in choosing whether or not to establish a federal assistance program and in choosing which strategy to adopt. In this section we attempt to provide rough estimates of the relative and absolute costs of the four strategies proposed in Chapters X-XIII. To do so we pose the following types of questions:

- For each proposed strategy, what will be the total cost for a single year of full-scale operation, if the entire eligible target group is served? (This is a maximum cost per year.)
- For each proposed strategy, what is the minimum feasible program budget for a single year of operation that will allow smooth and productive functioning? (This is a minimum cost per year.)
- How do the costs of the various proposed strategies vary over time? (For example, one program may have low costs the first year and high costs the second, while another has the reverse pattern.)

In the final analysis, a program costs the amount of money it spends in a year, which is determined by its Congressional budget appropriation. The size of the program is simply adjusted to the budget--not vice versa. Whatever the merits or demerits of this procedure it is a central fact of the present federal system.

Nevertheless, programs of different design do have what we can think of as different cost contours--the ranges of funding most appropriate to the intent, target group, and administrative structure of different strategies. Thus, while it is impossible to make an exact dollar calculation of the price of a program, we can establish high and low estimates for each of the plans discussed in the previous chapters.

Proposal A

One way to estimate the cost of Proposal A is derived from the knowledge that many eligible students are not now being served and that the present average Title I expenditure per pupil is roughly \$370.[*] We assume that this figure can reasonably be extended to the needs of intermediate and secondary students.[†]

One way to estimate the cost of Proposal A will be the product of the number of eligible students to be served times \$370, plus the costs of state and federal administration. From the reports of the total number for formula eligible[‡] students by state and by grade, we can establish that the difference between the number of Title I formula eligible students in grades 7 through 12 and the number of students in these grades who participate in Title I is approximately 1,705,000 (see Table 16). At \$370 per pupil, about \$631 million would be needed to pay for direct services to this number of students. Administrative costs in Title I are set by law at 1% for state level tasks, and we estimate that at least an equal amount is spent on the necessary federal level administrative tasks. The federal expenditures do not come directly out of the program appropriation but out of the DHEW administrative budget. Nevertheless, this is part of the real cost to the government and taxpayers. Thus the maximum cost per year for Proposal A would be in the neighborhood of \$631 million plus \$12 million, or \$643 million. We suggest that reductions from the \$643 million annual budget not be made by proportionately reducing the number of students served in each grade. To do so would run the risk of watering down the program to the point of serious inefficiency. Therefore, we

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[*] This extremely rough estimate was derived by dividing the FY1974 Part A appropriation by the reported number of participants in that year. Real expenditures vary considerably among districts and states, but are most unlikely to be less than \$250 or more than \$500 per pupil.

[†] Chapter VII suggests that appropriate services to students in grades 7-12 may cost somewhat more than they do for elementary students. However, there is insufficient evidence to date to calculate the difference, which we assume to be small.

[‡] "Formula eligible" refers to the population that is defined by poverty indices and that determines a county's budget authorization.

- High, which equalizes participation between elementary and secondary grades: $1 billion.
- Moderate, which equalizes participation and eligibility in grades 7-12: $643 million.
- Low, which equalizes participation and eligibility in grades 7-9: $292.7 million.

Proposal B

Because Proposal B is built on a different definition of the target group, we must adopt a slightly different method of estimating costs. In reality, states would set an achievement criterion for defining eligibility, but underfunding would create the same gap between eligibility and participation that we are familiar with in Title I. However, for the purposes of this report, we can estimate a series of cost-levels based on judgments about how high or low a criterion is chosen, and what grades are served.

First, we might think in terms of a criterion level set to identify students who by grade 12 would otherwise not be able to read at the 8th grade level. This seems to be about 12% of the student population.[*] The cost of assisting these students in grades 7-12 would run to about $983 million, while assisting only grades 7-9 students in this category would cost about $523 million dollars.

Naturally, the higher the criteria, the more students will fail these standards, and the higher the potential costs will be. If criteria are set such that 25% of students fall below their standards, the costs of assisting grades 7-12 eligibles rises to over $2 billion.[†] Treating only grades 7-9 students eligible by this criterion would cost about $1 billion.

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[*] That is, students scoring in the 12th percentile or below in grade 12 are considered not to be able to read at the level of the average grade 8 student.

[†] As a point of comparison, the FY1977 ESEA Title I budget of $2.05 billion serves about 25% of all the students in grades K-6.

Table 16

ESTIMATED NUMBER OF NONFUNDED ELIGIBLES, BY GRADE SPANS, REGIONS, AND SUBREGIONS, 1975-76

	Nonfunded Eligibles		
Region/Subregion	7-8*	7-10*	7-12
50 States	480,896	1,068,374	1,704,922
Northeast	107,720	238,468	421,953
New England	45,483	83,768	109,649
Middle Atlantic	62,237	154,700	312,304
North Central	154,519	311,775	490,868
E. North Central	127,570	241,810	380,954
W. North Central	26,949	69,965	109,914
South	96,738	291,376	474,684
South Atlantic	72,605	169,705	261,009
E. South Central	15,697	64,371	113,358
W. South Central	8,436	57,300	100,317
West	121,919	226,755	317,417
Mountain	12,222	28,320	58,519
Pacific	109,697	198,435	258,898

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*The following procedure was used to calculate number of nonfunded eligibles in grades 7 and 8 for 1975-76. For 1973-74, we obtained eligibles[1] and participants[1] data in 30 selected states. These data enabled us to calculate subregional estimates of nonfunded eligibles. We adjusted these estimates to take into consideration the missing state data and growth in Title I eligibles between 1973-74 and 1975-76 by multiplying our original subregional estimates by the ratio of the subregional total Title I eligibles to the subregional total Title I eligibles in the selected states.

suggest that a minimum budget be derived by hypothesizing a plan that serves grades 7, 8, and 9, with higher grades to be added in later years.

The difference between formula eligible and participating populations in these three grades is about 775,000. At $370 each, this would cost about $287 million. Again, we add 2% for administration to reach a total minimum cost of about $292.7 million.

The preceding method provides some guidance, but it is complicated by the fact that formula eligible students refers to a count of children from poverty families, while Title I project participants are chosen on the local level in terms of low achievement. It is also flawed by its hidden assumption that in the elementary grades, total participation and expenditure are limited to an amount corresponding to the size of the poverty-eligible population. Since we know that the number of participants sometimes exceeds the number of poverty eligibles in the early grades, this method still tends to shortchange the intermediate and secondary grades.

Therefore, another way to estimate the cost of Proposal A is to refer to the balance conditions outlined in the proposal itself. Districts need no longer spend incremental allocations solely on the secondary grades, we said, when they could show that the same proportion of students was being assisted in grades 7-12 as was being assisted in grades 1-6. Supposing that all districts reached this point, how many additional secondary students would be receiving services?

In the 47 states for which we have data, about 15.9% of all the students in grades 1-6 are participating in Title I.* The same percentage of the secondary level† would translate into approximately 3.27 million students. From this number, however, we need to subtract the number of secondary-aged students already participating in Title I (approximately 861,600). This brings the total number of new secondary student participants to about 2.41 million, and the cost (at $370 apiece) to about $892 million. Adding 2% for administrative costs brings this estimate to about $1 billion, or half again the current budget of Title I.

To summarize, we estimate the following cost levels for Proposal A.

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*In states such as California and Michigan, which have separate and additional state-funded compensatory education programs, the proportion of elementary students participating is, of course, much higher.

†In this case, we are using enrollment in grades 7-12 as the base.

Similarly, if a standard is chosen that only 10% of students fall below, then the total costs go down accordingly. Serving eligible students in grades 7-12 would then "cost" about $820 million; serving only eligible students in grades 7-9 would cost about $437 million.

Proposal B also requires both state and federal administration, which we again figure at 2%. In addition, it will entail some continuing extra costs for doing statewide testing. We estimate that the testing costs may run about $2.00 per student. These additions bring the estimates of total cost to those shown below.

	Cost ($ Thousands)		
	10 Percent are Eligible	12 Percent are Eligible	25 Percent are Eligible
All secondary grades (7-12)	$841	$1008	$2100
Junior high only (7-9)	448	537	1118

Whatever the merits of a 25th-percentile cutoff, it seems highly unlikely that a program would be funded at the level of $2 billion, given present commitments to Title I and Public Law 94-142. Therefore, we suggest these cost estimates:

- High: approximately $1 billion
- Moderate: approximately $700 million
- Low: approximately $450 million.

Proposal C

Cost estimates for the third proposal must be more speculative, because states are left to define both the type of program (e.g., research, service) and the target group. A reasonable minimum funding would seem to be indicated by the low estimate for Proposal A of $293 million, that is, the amount of money required to assist the grades 7-9 target group for A is probably adequate for establishing a modest and productive program for basic skills compensatory education in each state under Proposal C.

Medium and high costs for Proposal C are much more difficult to place. If enough money were provided to establish programs in all states of a size comparable to existing state-sponsored compensatory education programs, the price tag would be about $550 million. The cost could be much higher, however.

As these suggested costs indicate, Proposal C is not intended to be a lower-cost option. There should, of course, be some savings in federal level administrative costs. But the assumed virtues of Proposal C are the flexibility and responsibility is provides to state and local levels, not its price. Proposal C estimates can be summarized as follows.

- High: Unknown
- Moderate: $540 million
- Low: $293 million.

Proposal D

Finally, we come to the difficult question of the cost of Proposal D. As a moderate estimate, suppose we wanted a program that would focus federal research efforts on an adolescent project design with the same directness of purpose with which we have previously sought to improve elementary projects. This suggests turning toward adolescence the combined resources of the programs shown below.

	FY1973	FY1976
ESEA Title III	$146,393,000	$ 63,781,500
ESEA Title VIII	10,000,000	2,000,000
Right to Read	12,000,000	17,000,000
Teacher Corps	37,500,000	37,500,000
	$208,893,000	$120,281,500

Both years are shown because, since budget cuts have hit hard at Title III and Title VIII in recent years, it may be more appropriate to use the 1973 budgets as the standard for support. This suggests that $200 million would be a sensible moderate budget.

At the heart of Proposal D is the assumption that teacher retraining and organizational change must be both extensive and intensive. This mitigates somewhat the potential savings incurred by not using federal funds to pay direct instructional costs. Therefore, we estimate a minimum feasible budget at about $160 million, which would provide the resources for broad organizational change and appropriately extensive inservice training in approximately 10% of the nation's secondary schools.*

At the moderate level of funding, it would take between 12 and 15 years to complete a program that reached all of the nation's secondary schools. Within some limits, this schedule could be speeded up by providing more money in any given year. However, if the program is compressed into too few years, there will not be enough time for the learning and development on which it is premised. Therefore, the high estimate should probably not exceed $300 million per year in constant dollars.

Finally, we need to recognize that a program of applied research, demonstration, and installation will require proportionately more technical assistance and oversight at the federal level than does a support program. We suggest adding 2.5% to reach the budget estimate for this purpose.

To summarize, costs for Proposal D may be estimated as follows:

- High: $307.5 million
- Moderate: $205 million
- Low: $164 million.

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*Base figures here include a total secondary student population of about 22 million, with per pupil expenditures of about $1,500, dealing with 25% of their teachers for one-fifth of their time per week.

XV TARGETING AND ALLOCATIONS

If the administration or Congress is to make an informed choice from among the possible programs for adolescents, they will want to know more than the descriptions and total costs of the various programs. Specifically, they will want to know who would benefit from each alternative, and how money would be distributed among potential users. This is commonly referred to as "targeting and allocation."

Targeting is the process of determining who ought to be served by a federal program. First, a definition is constructed to use in identifying the characteristics of eligible persons. Next, an estimate is made of how many persons nationwide fit this description, that is, the size of the target group. Finally, some method is employed to determine how these individuals are distributed through the nation (Are they mostly in small towns? In Western or Southern states?).

Allocation is the process of deciding who gets money and how much. Usually this is done by means of a formula. This formula often contains "weights," which represent political, educational, or financial factors not reflected in the distribution of the target group, and which may combine or modify several possible target group definitions.

In the course of describing our four proposals, a series of target groups and allocation criteria have been suggested. The implications of each will be explored below.

Before we do so, however, it will be useful to review the present targeting and allocation procedures of ESEA Title I.

Targeting and Allocation in Title I

The ESEA Title I target group is ordinarily thought of as poor children. This tends to oversimplify the reality of targeting funds for this program. It may be helpful to think in terms of the program having several successive target groups. The legislation clearly identifies the first target group not as children at all, but as school districts--specifically, "local educational agencies serving areas with concentrations of children from low-income families." The amount of money a district receives in any year depends on the proportion of all children from low-income families who reside in that district. Thus, poor children are a second target group. However, it is important to remember that while the Title I allocation formula is "based on" low income, or poverty, it also contains a variety of other factors that influence the distribution of money.

In simplified terms, a district's annual allocation is determined as follows:

(1) From the census is taken the number of children aged 5-17 in low-income families residing in a given county. ("low-income" is a standard often referred to as the Orshansky Index of Poverty. Instead of a fixed-income cutoff, e.g., $4000, this index varies with such factors as size of family and type of community.)

(2) To this is added two-thirds of the number of children aged 5-17 in families receiving from AFDC an amount in excess of the poverty index, in that county.

(3) To this is added the number of institutionalized neglected and delinquent children receiving services from LEAs and the number of foster children residing in that county.

(4) This total is multiplied by 40% of the state or national average per-pupil expenditure (whichever is greater) but not less than 80% nor more than 120% of the national average per-pupil expenditure. This figure is a county's greatest authorized allocation.

(5) Because Title I is not fully funded, these authorized county allocations must then be ratably reduced to match that year's actual appropriation.

(6) An iterative process assures that all counties and districts receive at least 85% of their previous year's allocation.

(7) Money is distributed within districts to schools on the basis of the number or proportion of children in poverty families residing in a school's attendance area.

It is at this point that the third target group is introduced--those children on whom the money may be spent.

(8) Schools use their Title I allocations to meet the special educational needs of "educationally deprived children," regardless of the income level of such a child's family.

Obviously there is much more to Title I than a "poverty count." Factors such as AFDC, per-pupil expenditure, and hold harmless attempt to balance the interests and power of North and South, urban and rural areas. Overall, the formula tends to favor rural and Southern areas rather less than would a distribution based on poverty alone. Some indices are updated more frequently than others, and the relative importance of the several factors changes over time. Of course, this leads to periodic amendments of the formula. For example, in 1974 the number of AFDC children (53% of all formula children) actually exceeded the number of census-count children, with a resulting decrease in the proportion of funds going to Southern and rural areas. The formula was subsequently amended in such a way as to decrease the importance of the AFDC children who, in 1976, constituted only 8.5% of the total.[1]

Throughout this report we have stressed the importance of Title I as the foundation of federal compensatory education and basic skills efforts. Each of our proposals assumes that Title I will continue at least at its present level of funding and in approximately its present distribution among states and grades. Thus, any new funds devoted to assisting intermediate and secondary students need to be thought of as increments to this Title I base.

Targeting and Allocation for Proposal A

Proposal A was designed to conform as much as possible to the philosophies and procedures of ESEA Title I. Thus its target group is, in the first instance, districts with concentrations of poverty children. Two suggestions were made for allocations formulas. The first formula would make no change in the present Title I allocations from federal to state, county, and district levels. For simplicity's sake, we will call this a "poverty count." The second, and optional, formula would weight these allocations by the relative proportions of secondary and elementary-aged students residing in a state, county, or district. In effect, it would send more money to those places that had proportionately more secondary students. We refer to this as a "weighted poverty count."

In order to make an informed choice between these two formulas, it is necessary to know how much is at stake for a particular type of district. In order to determine this, we did a simple simulation. Suppose, we said, an amount of money were available to Proposal A equal to 10% of the present Title I budget (i.e., about $230 million); by what percent would a district's budget increase under each formula?

Simulation Model

The derivation of district poverty counts was quite straightforward. From the 1970 Census Fourth Count school district data, we extracted the number of children 6 to 17 years old in families below the Social Security Administration poverty index (Orshansky).* By comparing this number with the total number of children in that district, we could obtain an estimate of the percent of LEA children eligible for Title I. As the discussion in the preceding section suggests, this is a good but not perfect estimate of the number of Title I formula children. Similarly, it provides a good but not perfect estimate of the proportion of all available Title I funds that a district will receive.

Definitions for Size and Type of Community Analysis

For analyses of the potential effects of Proposal A (and subsequently of Proposal B), we were particularly interested in how school districts in different kinds of communities would be affected. The following mutually exclusive categories were derived from the classification system in use by the National Assessment of Educational Progress, but differ from them in certain ways convenient to our study.

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*The Title I formula counts children aged 5-17. The form of the census data that we were using made it far more convenient to use the age span 6-17. Because we were interested not in absolute numbers but in proportionate distribution, this made little if any difference to our model.

Low Urban: School districts in urbanized areas with population greater than 200,000, where a high proportion of adults are either not regularly employed or are on welfare, and a low proportion are employed in professional or managerial positions.

High Urban: School districts in urbanized areas with population greater than 200,000, where a high proportion of adults are employed in professional or managerial positions, and a low proportion are factory workers, are not regularly employed, or are on welfare.

Urban Fringe: School districts in urbanized areas with population greater than 200,000 but outside the city limits and not classified as Low Urban or High Urban.

Mixed Urban: School districts in urbanized areas with population greater than 200,000 but not classified as Low Urban, High Urban, or Urban Fringe, or containing a mixture of these types.

Medium Cities: School districts in cities with population between 25,000 and 200,000.

Extreme Rural: School districts in open country or places with population less than 10,000, where a high proportion of adults are farmers or farm workers, and a low proportion are professional, managerial, or factory workers.

Small Places: School districts in open country or places with population less than 25,000 but not classified as Extreme Rural.

Results

With such a model, we can verify what common sense and simple arithmetic will already have suggested. That is, other things being equal, a 10% increase in total funds when distributed through the same formula will produce a 10% increase in all districts' allocations.

This is convenient, because it can serve as a standard point of comparison among districts and among formulas, as we will see below.

What if the alternative formula is adopted, which distributes money according to a count of secondary-aged poverty formula children? Table 17 shows this comparison for districts classified by the size of the city in which a school district is located. Comparing columns (2) and (3), we see that while everybody does get some amount of additional money under both formulas, districts in smaller population centers will get more under the weighted poverty formula than do other types of districts. To put

Table 17

PERCENT INCREASE IN FUNDING USING ALTERNATIVE ALLOCATION FORMULAS FOR PROPOSAL A BY SIZE OF CENTRAL CITY

Size of Central City (1)	Poverty Count (2)	Weighted Poverty Count (3)
More than 200,000	10%	8.8%
50,000 - 200,000	10	9.5
Less than 50,000	10	10.6

this another way, districts in centers of less than 50,000, and, presumably, their Congressional representatives, would prefer the weighted formula. The larger the population center in which the school district is located, the stronger the preference for the original formula.

This phenomenon is also apparent if we compare the effects of the two formulas on a larger variety of district types. Table 18 shows seven such types. (Definitions of each type are found in Appendix E.) In general, urban districts have a greater advantage under the original formula; the rural and semirural districts have a greater advantage from the weighted formula.

Why should this be? Recall that the only difference between the two formulas is the weighting for secondary-aged children. Therefore, districts that do better under the second formula are those that have more secondary-aged children than elementary-aged children. Many circumstances might account for having a relatively smaller proportion of young children. Families in those districts may be having fewer children (that is, the birth rate is falling differentially) or housing costs might be so high that young families with small children cannot afford to enter the neighborhood, or young adults may be moving out of these districts because they have little to offer economically. Without more detailed analysis we cannot be certain which if any of these hypotheses apply in a given district.

Table 18

PERCENT INCREASE IN FUNDING USING ALTERNATIVE ALLOCATION FORMULAS FOR PROPOSAL A
(By Size and Type of Community)

Size and Type of Community (1)	Poverty Count (2)	Weighted Poverty Count (3)
Low Urban	10.0%	8.8%
Mixed Urban	10.0	8.8
High Urban	10.0	10.8
Urban Fringe	10.0	10.0
Medium Cities	10.0	9.5
Small Places	10.0	10.5
Extreme Rural	10.0	11.0
All Districts average	10.0%	10.0%

Targeting and Allocation for Proposal B

Proposal B was designed to resemble Proposal A in structure, but to differ from it on important points of content and philosophy. The most significant of these differences is the choice of target groups. Proposal B uses low-achieving students as the target group, based on the assumption that children from both poor and nonpoor families are not meeting competency standards and are equally in need of assistance. Moreover, it implies that society will be better off if more students (independent of their family income) are able to achieve basic standards of educational competence.

A wide variety of allocation formulas are possible within such a target group philosophy, depending upon what standard of minimum competence is adopted. A criterion could be set, for example, that was so low that only a small proportion of students (say, 5%) would fall below its standard. For convenience, let us refer to such a criterion as "restricted" because it permits only a small number of eligible target students. At the other extreme, a criterion could be set that was so high that a very large proportion of students (say, 30%) fell below its standard. Let us refer to such a criterion as "expanded," because it permits a large number of eligible target students.

Simulation Model

In order to understand the distributional effects of choosing a restricted or expanded criterion it was again necessary to simulate the allocation of a sum of money. To do this, we expanded the model used for Proposal A, so that we could assess not only the relative personal income of district residents, but also their relative competence in basic skills. This meant combining the census data with a test of basic skills.

In selecting a test for deriving performance counts our three principal criteria were that (1) the test be comparable across states, (2) the test assess an area of basic skill development, and (3) the test be given at the secondary grade level in at least a subregionally representative number of states. The test selected that fulfilled all these criteria is the Year 06 Reading Assessment of the National Assessment of Educational Progress (NAEP).

The NAEP test differs from more familiar standardized tests in many ways. Most "norm-referenced" tests produce information about how a particular student or group of students compares with all other students taking that test (that is, the relative level of performance). The NAEP, by contrast, is a content-referenced (or criterion-referenced) test designed to give information on the absolute level of performance of students, and on changes in the absolute level of performance over time.

In 1974-75, this criterion-referenced reading test was administered to a national probability sample of approximately 23,000 students in each of these age subpopulations: 9-year-olds, 13-year-olds, and 17-year-olds. Items for the 13-year-olds tested vocabulary and sentence skills, comprehension, and certain skills of logical reasoning appropriate to this age group. Thus it provided almost exactly the characteristics of tests most likely to be used by states if Proposal B were adopted.

Oversampling strategies were used by NAEP to assure adequate representation of region and size and type of community-reporting categories. The primary sampling units in this three-stage sample consisted of selected counties or groups of contiguous counties; the secondary sampling units consisted of selected schools within these counties; and the tertiary sampling units were selected students within the sample schools.

Sample weights and individual exercise part (item) responses were provided to us by NAEP for each student tested. A simple raw score derived as the sum of correct item responses was computed for each student. Then, making use of the sample weights, these raw scores were aggregated at state, census subregion, census region, and national levels. This procedure enabled us to determine the percentile rank for each student in each of four groups: state, subregion,* region, and the nation. At no point were individuals identified. And finally, after matching the school attended by each child to a public school district, this procedure made possible the estimation of student score distributions for each district that were directly comparable across regions of the country. These sample distributions, or more precisely, the cumulative frequency evaluated for a set of percentile ranks (lowest 5%, 10%, 15%, and the like) are the ultimate measures of performance for a district.

After identifying those districts for which NAEP sampled schools, we merged the NAEP respondent file with data obtained from the following sources: 1970 Census Fourth Count School District Tapes, 1972 Office of Civil Rights Data Tape, 1974 NIE Master File (derived from ELSEGIS III and State Title I annual reports), and supplementary data obtained from the National Center for Education Statistics.

As a condition to receiving open access to NAEP data we agreed that no information would be released that directly compared the performance profiles of individually identified states or that identified single districts. This agreement of confidentiality is in keeping with NAEP's charter, and we feel that little useful purpose would be served in this paper by such comparison, particularly since Proposal B can use a federal-to-state distribution based on other measures. Therefore, the procedure described above was used only to compute relative eligibility rates by subregion and for prototypical districts.

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*In our analyses, we divided the four regions into nine subregions, which the Census Bureau refers to as "geographic divisions." The states within each subregion are listed in Appendix E.

With this merged data we were able to calculate for each type of district the allocation it would receive under a variety of achievement criteria.

Analyses were done along five sets of variables. They were:

- Region and subregion
- Size and type of community
- Population of central city
- Percent of families with income less than $4000
- Percent of minority students enrolled.

From the many variables that the data base could have provided, these were chosen for two very practical reasons. First, these are variables that are of particular interest to policy makers as they weigh and choose among alternative allocation plans. Second, these five variables were relatively quick and easy to use and met the requirements of a modest computer budget. Certainly other variables would have provided valuable information to the educational and academic communities, and we hope that these can be produced at some later date.

The complete set of tabulations is contained in Appendix E. Because it was not practical to do a complete analysis of the tables at this time, the following discussions can only highlight some of the more obvious findings.

Results by Size and Type of Community

The results of the allocation simulation for Proposal B reveal several interesting patterns. For example, in the nation generally and in most of the nine subregions, the biggest cities (labeled Mixed Urban) and most economically disabled portions of cities (labeled Low Urban) benefit most from the choice of a very restrictive criterion and lose some portion of their relative advantage when expanded criteria are used. This can be seen in Table 19 by observing the declining sequence of numbers reading left to right for districts of the Low-Urban and Mixed-Urban types (18.5 to 13.2, and 15.8 to 10.9).

Table 19

PERCENT INCREASE IN FUNDING USING ALTERNATIVE ALLOCATION FORMULAS FOR PROPOSAL B (BY SIZE AND TYPE OF COMMUNITY)

Size and Type of Community	Percentile Criterion Cutoffs					
	5th (4)	10th (5)	15th (6)	20th (7)	25th (8)	30th (9)
Low Urban	18.5%	16.9%	16.1%	14.7%	13.7%	13.2%
Mixed Urban	15.8	14.2	13.2	12.1	11.4	10.9
High Urban	9.3	12.4	12.8	15.0	15.3	16.3
Urban Fringe	12.5	16.0	16.7	17.6	18.2	18.6
Medium Cities	9.9	9.6	9.2	9.0	8.6	8.5
Small Places	7.3	7.8	8.1	8.6	8.9	9.1
Extreme Rural	9.8	8.2	8.8	8.2	8.5	8.5

The opposite applies to the wealthier cities (labeled High Urban) and the suburbs (most of which are in the Urban Fringe category). These areas benefit least from the choice of a very restrictive criterion and improve their position considerably when expanded criteria are used. This can be seen in Table 19 by observing the increasing sequence of numbers, reading left to right, for districts of the High-Urban and Urban-Fringe types (9.3 to 16.3, and 12.5 to 18.6).

The remaining types of districts, in medium cities and small and rural places, are relatively unaffected by the selection among achievement criteria.

This brings us to the most striking pattern of all: urban and suburban districts would have proportionately more to gain under almost any achievement criterion than would districts in rural areas and small towns. This can be seen easily in Table 19 by comparing Rows 1-4 (in which almost all the increases are over 10%) to Rows 5-7 (in which all the increases are under 10%).

We can offer two partial explanations for this pattern. The first is related to the fact that the numbers in Table 19 are percentage increases over a poverty base. As shown in Table 20, only a very low percentage of children in High-Urban and Urban-Fringe districts were initially eligible for Title I.

Table 20

ESTIMATED PERCENT OF CHILDREN RESIDING IN DISTRICTS WHO ARE POVERTY ELIGIBLE

Low Urban	16.5%
Mixed Urban	16.2
High Urban	4.1
Urban Fringe	6.3
Medium Cities	18.3
Small Places	15.7
Extreme Rural	19.4
Weighted Average	14.4%

This very low Title I eligibility means that even a moderate eligibility rate under a Proposal B criterion would produce a large percentage increase. Simply put, any district will get an increase of over 10% if it contains a greater proportion of the low-achieving target group than of the low-income target group. Table 21 confirms this.

Table 21

PERCENT DISTRIBUTION OF TARGET GROUPS
(BY SIZE AND TYPE OF COMMUNITY)

Size and Type of Community	Percentile Criterion Cutoffs 5th (1)	10th (2)	15th (3)	20th (4)	25th (5)	30th (6)	Poverty Population (7)
Low Urban	4.5%	4.4%	4.4%	4.3%	4.3%	4.3%	4.2%
Mixed Urban	15.5	15.3	15.2	15.0	14.9	14.8	14.7
High Urban	2.3	2.3	2.3	2.4	2.4	2.4	2.3
Urban Fringe	5.1	5.2	5.3	5.3	5.3	5.4	5.0
Medium Cities	18.3	18.2	18.2	18.1	18.0	18.0	18.3
Small Places	45.5	45.8	45.9	46.1	46.3	46.4	46.7
Extreme Rural	8.9	8.8	8.8	8.8	8.8	8.8	8.9
Total Percent	100.1%	100.0%	100.1%	100.0%	100.0%	100.1%	100.1%

For all the big-city and suburban-district types (Rows 1-4) the numbers in Columns (1)-(6) are larger than or equal to the number in Column (7).* Conversely, for all medium-city and rural-district types (Rows 5-7), the numbers in Columns (1)-(6) are smaller than or equal to the number in Column (7).

We should recall that greater percentage increases do not necessarily mean greater increases in absolute dollars. Table 22 illustrates this point. Suppose $230 million were available to Proposal B:

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*We must be careful not to be misled by this pattern. It does not show that city and suburban schools are worse than rural schools--only that city and suburban children are more likely to be low-achieving than low-income, as defined by the measures in our model.

Table 22

PERCENT AND DOLLAR INCREASES FOR PROPOSAL B (BY SIZE AND TYPE OF COMMUNITY)

Size and Type of Community	Percent Increase in Funds Using 15th-Percentile Criteria	Total Number of New Dollars in Millions
Low Urban	16.1%	$ 15.2
Mixed Urban	13.2	44.4
High Urban	12.8	8.6
Urban Fringe	16.7	19.0
Medium Cities	9.2	38.4
Small Places	8.1	86.5
Extreme Rural	8.8	17.2
	Average 10.0%	Total $229.3

Notice that Urban Fringe districts would receive a 16.7% increase over their base, but that this is only $19 million. By comparison, Small Place districts would receive an increase of only 8.2% more than previously, but would receive the largest real dollar amount--$66.5 million.

The second partial explanation is also related to the expression of new money as a percentage of the previous compensatory education budget. Recall that our model uses the Social Security Administration index as a proxy for Title I eligibility. Some critics of the index argue that it does not adequately identify urban poverty.* They feel that the single variable of "farm" or "non-farm" is inadequate to reflect differences in the cost of living that face such diverse groups as small town, suburban and inner city ghetto residents. If they are correct, then our poverty count based on the SSA index may underrepresent the "real" poverty population of urbanized areas.

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*Several agencies are now reviewing this issue. One alternative is to modify the SSA index by the Bureau of Labor Statistics cost of living index for 14 major cities.

In closing this section, we should note that there are some important subregional variations to this pattern. In the Pacific subregion, the largest proportionate increases do not go to the biggest cities, but rather to cities and towns in the Medium-Size range (50,000-200,000). This is demonstrated in Table 23.

Table 23

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE
ALLOCATION FORMULAS FOR PROPOSAL B
(BY POPULATION OF CITY FOR PACIFIC STATES)

	Percentile Criterion Cutoffs					
Population of City (1)	5th (4)	10th (5)	15th (6)	20th (7)	25th (8)	30th (9)
More than 200,000	10.4%	9.9%	9.0%	8.6%	8.9%	8.8%
50,000-200,000	12.2	13.7	14.1	14.6	15.2	15.8
Under 50,000	9.1	8.9	9.2	9.3	8.9	8.8
All districts average	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

This variation is further accentuated in the Middle Atlantic subregion, as shown in Table 24. There, medium cities and small towns both gain proportionately more than do big cities, regardless of which achievement criterion is chosen.

With these two exceptions, however, the general pattern of greater benefit to big cities is sustained in subregional analyses.

Table 24

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS FOR PROPOSAL B (BY POPULATION OF CITY FOR MIDDLE ATLANTIC STATES)

	Percentile Criterion Cutoffs					
Population of City (1)	5th (4)	10th (5)	15th (6)	20th (7)	25th (8)	30th (9)
More than 200,000	7.7%	7.4%	7.5%	6.0%	6.1%	5.7%
50,000-200,000	14.4	14.7	13.7	12.7	12.1	11.8
Under 50,000	11.0	11.3	11.4	12.5	13.1	13.5
All districts average	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Comparing Proposals A and B

We have been anxious to stress that all four proposals should be considered as incremental additions to existing programs. Nevertheless, the existence of the proposals and of the simulation model naturally raises the question, "What would happen if the entire Title I budget were reallocated according to an achievement criterion rather than a poverty criterion?"

Our analyses to date suggest that if this were done, large cities and suburbs would end up with more money; Medium Cities and Small and Rural Places would end up with less money. Moreover, as Table 25 suggests, it appears that Northeastern and Pacific states would fare a bit better than before, and Southern and Plains states a bit worse.*

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*Note that this is the result of comparing the NAEP 1975 achievement scores with 1970 Census poverty counts. The 1975 Survey of Income and Education shows that the concentration of poverty families in Northern states increased during the five-year period 1970-1975, while the concentration of poverty families in Southern states decreased. Further analysis will be needed to determine how much of the "northern-urban" shift we discuss can be traced to this change of demography.[2]

Table 25

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS (BY SUBREGION)

	Proposal A		Proposal B						
			Percentile Criterion Cutoffs						
Subregion (1)	Poverty Count (2)	Weighted Poverty Count (3)	5th (4)	10th (5)	15th (6)	20th (7)	25th (8)	30th (9)	NAEP Survey Weight (13)
New England	10.0%	9.0%	16.2%	14.1%	15.1%	15.5%	15.0%	14.7%	3.2%
Middle Atlantic	10.0	9.1	12.2	12.3	12.0	12.1	12.4	12.7	12.6
East No. Central	10.0	9.9	13.5	13.6	14.1	14.7	14.9	14.9	15.8
West No. Central	10.0	10.4	3.9	4.5	5.5	6.2	7.3	8.3	6.9
South Atlantic	10.0	10.0	10.0	9.6	9.2	8.8	8.5	8.2	16.1
East So. Central	10.0	10.3	7.0	6.7	6.8	6.9	6.8	6.7	6.8
West So. Central	10.0	10.2	10.7	10.3	10.1	9.5	9.1	9.1	8.9
Mountain	10.0	10.9	7.7	9.3	9.6	9.8	10.5	11.1	3.6
Pacific	10.0	10.1	10.5	11.5	11.7	11.9	12.0	12.0	12.1
Unknown Eligible	-	-	-	-	-	-	-	-	5.2
Unknown District	-	-	-	-	-	-	-	-	8.9
All districts average	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	100.0%

Table 26 displays districts by their percent of minority students and allows us to compare how they would fare under Proposals A and B. Districts with low concentrations of minority students (0-20%) appear to be best off with a very expanded achievement criterion; their next best option is either of the Proposal A formulas. Districts with very high concentrations of minority students (60-100%) would find any achievement criterion preferable to the use of a poverty criterion and profit most from the choice of a very restricted achievement criterion. A third pattern obtains for districts in the midrange (with 30-60% minority students). They get the greatest percentage increases from the choice of a very restricted achievement criterion; their second best option is Proposal A.

Finally, Table 27 displays districts according to the percentage of families with incomes of less than $4,000. Recalling that the poverty index used in this simulation and in the actual Title I distribution is not a fixed-dollar amount but rather varies with family size and location, this fixed index gives us another type of comparison. What we see is that districts with very few poor families (10-20%) do better under an achievement criterion than under the poverty criterion used in Proposal A. This is certainly not surprising; districts with few poor people would do better under almost anything other than a poverty criterion. The converse is also obvious. Districts with many poor families do better under a poverty criterion than under an achievement criterion.*

These national patterns with respect to minority students and family-income characteristics of districts should be treated with caution, however. As demonstrated in Appendix E, subregional differences are pronounced. We infer from this that differences within and among states would be equally variable.

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*Table 27 may also be compared to Table 19. Doing so, we can hypothesize that the districts with high percentages of families with incomes below $4,000 are primarily not in large urban areas. Again, this raises the question of how to construct an appropriate index of poverty.

Table 26

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS FOR PROPOSALS A AND B (BY MINORITY STUDENT ENROLLMENT)

	Proposal A		Proposal B						Sample Statistics	
			Percentile Criterion Cutoffs							
Percent Minority Students Enrolled (1)	Poverty Count (2)	Weighted Poverty Count (3)	5th (4)	10th (5)	15th (6)	20th (7)	25th (8)	30th (9)	Percent of LEA Children Title I Eligible (10)	Survey Weight (13)
0 - 10%	10.0%	10.2%	8.4%	9.9%	10.7%	11.7%	12.5%	13.2%	8.2%	36.8%
10 - 20	10.0	9.7	8.0	9.1	9.6	10.2	10.5	10.8	11.5	7.7
20 - 30	10.0	9.8	8.0	9.1	9.5	9.3	8.9	8.8	18.0	8.0
30 - 40	10.0	10.0	11.1	10.0	9.0	8.5	8.2	8.0	24.0	9.6
40 - 50	10.0	10.0	15.1	13.0	12.0	10.8	9.9	9.3	24.1	4.1
50 - 60	10.0	9.7	10.8	9.8	9.4	9.1	8.9	8.5	23.5	3.9
60 - 70	10.0	8.9	13.0	12.3	12.2	11.2	10.3	9.7	21.1	4.2
70 - 80	10.0	10.7	19.5	17.2	15.2	13.5	11.8	10.5	32.1	1.0
80 - 90	10.0	8.5	21.9	23.0	19.1	16.8	14.9	14.4	15.2	.3
90 - 100	10.0	12.2	6.2	6.4	6.9	7.0	6.8	6.6	41.1	.6
Unknown	10.0	10.3	6.8	6.6	7.4	7.9	8.7	9.2	13.6	9.7
Unknown Eligible	-	-	-	-	-	-	-	-	-	5.2
Unknown District	-	-	-	-	-	-	-	-	-	8.9
All districts average	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	14.4%	100.0%

Table 27

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS FOR PROPOSALS A AND B (BY FAMILIES WITH INCOME UNDER $4,000)

	Proposal A		Proposal B						Sample Statistics	
			Percentile Criterion Cutoffs							
Percent of Families in District Below $4,000 Income (1)	Poverty Count (2)	Weighted Poverty Count (3)	5th (4)	10th (5)	15th (6)	20th (7)	25th (8)	30th (9)	Percent of LEA Children Title I Eligible (10)	NAEP Survey Weight (13)
0 - 10%	10.0%	10.3%	13.8%	16.9%	17.5%	19.0%	20.3%	21.3%	4.6%	24.8%
10 - 20	10.0	9.4	11.2	11.2	11.0	10.8	10.7	10.7	13.8	39.0
20 - 30	10.0	10.2	8.5	7.8	7.9	7.8	7.6	7.5	24.6	18.9
30 - 40	10.0	10.8	6.7	6.3	6.5	6.3	6.1	6.0	33.6	2.4
40 - 50	10.0	11.6	7.9	7.9	7.8	7.1	6.8	6.1	47.8	.5
50 - 60	10.0	13.5	6.0	6.4	6.4	6.8	6.4	6.2	62.1	.3
Unknown Eligible	-	-	-	-	-	-	-	-	-	5.2
Unknown District	-	-	-	-	-	-	-	-	-	8.9
All districts average	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	14.4%	100.0%

Of course we need to remember that we are speaking here of the effects of an unmodified achievement-criterion formula. Experience suggests that by the time any such formula were made final, a number of other factors would have been inserted to temper its effects. The history of the present "poverty-based" Title I formula indicates the sophistication with which factors can be combined--and the frequency with which they can be recombined. Nevertheless, it is safe to say that the general effect of changing to an achievement-based formula would be to benefit Northern and urban districts somewhat more than is currently the case.

These findings contradict those of a previous study done at the Stanford Research Institute.[3] Guthrie, Frentz, and Mize concluded that the use of an achievement criterion would tend to leave big cities worse off than before. Further study would be needed of both simulations in order to explain their differing conclusions. Possibly because the Gurthrie-Frentz-Mize model relied heavily on achievement data from California, it may have overgeneralized subregional differences peculiar to the Pacific states. Our present budget could not include comparative analysis with the Guthrie-Frentz-Mize study, though it certainly should be done in the future. In the meantime, we believe that the simulation model used in our study is likely to produce more accurate national analyses because it uses a more recent census base,[*] a single criterion-referenced test instead of several norm-referenced tests, and contains a nationally representative sample of students.

Targeting and Allocation for Proposal C

For both of the previous proposals, the target group was a particular type of student, and the allocation results were best discussed in terms of what kind of districts would benefit. Proposal C uses a different framework, however. The target of the bloc grants is state educational agencies, and allocation results are best discussed by state.

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[*] 1970, rather than 1960.

Chapter XII discusses the problem of devising a feasible and equitable formula. The reader will recall that the simplest formulas are those based on state characteristics that do not change rapidly. For example, state population, or population weighted by some factor such as property value or educational expenditures, are commonly used formula bases. The Congress is adept at negotiating such formulas, and we have not simulated any of them in this project.

However, we did suggest that a particularly attractive formula would be one that accounted for the likelihood that a state will have low-achieving students without having to use a national achievement test. (This formula was also suggested for federal-to-state distribution under Proposal B.) In order to determine the consequences of such a formula, a new simulation model was needed.

Simulation Model

Simulating the distribution of money raised two crucial questions:

(1) Given a child's family income level, how likely is he/she to achieve below a specific achievement level?

(2) Does this likelihood vary by region of the country?

The simulation model used previously for Proposal B could not be used to answer these questions, for several reasons. First, our agreement of confidentiality with NAEP precluded the use of that data set at the state level. Second, because the NAEP sample design was not intended to by representative by state, we could not be confident of its reliability for such a task, even if it had been available. Third, while the combined Census/ELSEGIS/NAEP data base provided information about the wealth and achievement status of districts, it did not provide similar information about individual students; without such information, we could not produce the estimates required for the state distribution formula.

What was needed instead was a source of information on individual achievement levels, family incomes, and places of residence of a nationally representative sample of students. To our surprise, these data were all available in some form in the 1965 Survey of the National Center for Health Statistics (NCHS). With these data we were able to calculate, by region and by income group, the probability that a child would score at or below the 20th percentile of the Wide Range Achievement Test (WRAT). After revising income categories to 1970 levels, we could then use the 1970 Census to estimate the number of low-achieving children in each state.*

Results by Income Category

The first step of this simulation was to determine what proportion of children from various family income groups were likely to be low-achieving. To do this, the NCHS sample of children was divided by a series of family income levels; within each income level, we determined what percentage of the sample students had received scores below the 20th percentile of the WRAT. When national rates had been derived, the procedure was repeated by region of the country. The NCHS survey divided the nation into four geographic regions. These four regions resemble the Census Bureau's regional groups, but vary and collapse them somewhat in order to create regions of roughly equal populations.† The sample size and its distribution did not allow us to calculate subregional rates with confidence. Table 28 displays these low-achievement rates by family income and region.

Since "low-achieving" is defined for this simulation as scoring below the 20th percentile, it is interesting to note those income categories and regions in which more than 20% of the children fall below this standard. As we would expect, this is the case for the lowest two income categories in all regions. Children from families in the lowest category ($0-$3,500) are at least twice as likely to be low-achieving as children from families in the $6,000-$9,000 range. The likelihood of a child being low-achieving drops off sharply at about the $9,000 income line. The familiar pattern of low income and low achievement is very much in evidence.

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*For a slightly more detailed discussion of this methodology, see Appendix F.

†The states included in each NCHS region can be seen in Table 29. For a further explanation of the stratification design, see Reference 4.

Table 28

LOW-ACHIEVEMENT RATES
(BY REGION AND INCOME CATEGORY)

	Rate of Children's Low-Achievement*			
1970 Family Income	Northeast	Midwest	South	West
$ 0 - 3,499	35%	38%	55%	41%
$ 3,500 - 5,999	30	24	36	27
$ 6,000 - 8,999	21	16	21	12
$ 9,000 - 12,499	8	11	11	8
$12,500 and above	5	7	6	4

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*Source: Reference 5.

However, there are also very substantial differences among regions. For example, although the Northeast has the lowest rate of low-achieving students in the lowest-income category, the Midwest shows the lowest rate in the $3,500-$6,000 category, and the West is lowest in the $6,000-$9,000 category.

Advocates of using compensatory education allocation formula based on low-achievement have debated the merits of several different methods. Because the periodic administration of a national achievement test has significant political liabilities, the use of income-achievement overlap rates has been suggested as an alternative. The findings discussed above suggest, however, that the use of single national rate would not be wise.

Rather, a series of rates keyed to both region and income category would be necessary in order to avoid seriously distorting the distribution of money.

Results by State

Suppose $230 million were available to Proposal C. How much would each state receive? Table 29 presents this simulation, based on the regional and income level low-achievement rates derived above. The table also presents the percentage distribution among states under this formula and compares it to the percentage distribution of Title I in FY1977.

Comparing Columns (3) and (4) in Table 29, we see that the formula for Proposal C produces an overall distribution of money that is remarkably similar to the distribution of ESEA Title I in FY1977. That is, the major regions and most of the states would receive approximately the same proportion of the new money hypothesized for Proposal C as of the current funds distributed under Title I. Column (6) converts the percentages of Column (4) into the dollars doing to each state and region if Proposal C were initially funded at $230 million. The relatively small differences between the two formulas are almost inconsequential as long as we are discussing the distribution of new and marginal funds. This, of course, is exactly what we are proposing.

However, as with previous formulas, it is also instructive to explore the implications of using the allocation formula of Proposal C for the distribution of all Title I funds. In that case, even small differences between Columns (3) and (4) assume considerable importance. Column 5 helps us to understand these changes, by presenting the difference between the two allocations as a proportion of the present Title I allocation.

We see now that if all the ESEA money were redistributed on a formula that used an achievement proxy of the design discussed here, the South would gain about 11% over its current funds, the Midwest would gain about 7% over its current funds, while the West would lose about 6% of its current funds, and the Northeast would lose about 15% of its

Table 29

PERCENT OF TOTAL POPULATION, OF ALL LOW-ACHIEVING STUDENTS, AND OF NEW DOLLARS RECEIVED UNDER PROPOSAL C

(BY STATE)

Column (1) States	Column (2) Percent of Total Population (1970)*	Column (3) Percent of All LEA Title I Allotments for FY77†	Column (4)§ Percent of All LEA Allotments Under Proposal C‡	Column (5) Percent Change Between Columns (3) and (4)	Column (6) New Dollars Received Under C (in thousands)
Northeast	(24.12%)	(22.90%)	(19.49%)	(-14.89%)	($44,827)
Connecticut	1.49	0.97	1.03	6.19	2,369
Maine	0.49	0.39	0.52	33.33	1,196
Massachusetts	2.80	1.94	2.09	7.73	4,807
New Hampshire	0.36	0.17	0.31	82.35	713
New Jersey	3.53	2.90	2.62	-9.66	6,026
New York	8.96	10.92	7.36	-32.6	16,928
Pennsylvania	5.80	5.03	4.97	-1.19	11,431
Rhode Island	0.47	0.40	0.38	-5	874
Vermont	0.22	0.18	0.21	16.67	483
Midwest	(25.33)	(20.24)	(21.6)	(6.72)	(49,680)
Illinois	5.46	5.39	4.52	-16.14	10,396
Indiana	2.55	1.37	2.22	62.04	5,106
Iowa	1.39	0.92	1.24	34.78	2,852
Michigan	4.36	4.38	3.72	-15.07	8,556
Minnesota	1.87	1.59	1.42	-10.69	3,266
Missouri	2.30	1.86	2.12	13.98	4,876
Ohio	5.23	3.09	4.5	45.63	10,350
Wisconsin	2.17	1.64	1.86	13.41	4,278

Table 29 (Continued)

PERCENT OF TOTAL POPULATION, OF ALL LOW-ACHIEVING STUDENTS, AND OF NEW DOLLARS RECEIVED UNDER PROPOSAL C (BY STATE)

Column (1) States	Column (2) Percent of Total Population (1970)[*]	Column (3) Percent of All LEA Title I Allotments for FY77[†]	Column (4)[§] Percent of All LEA Allotments Under Proposal C[‡]	Column (5) Percent Change Between Columns (3) and (4)	Column (6) New Dollars Received Under C (in thousands)
South	(24.21%)	(32.38%)	(35.97%)	(11.09%)	($82,731)
Alabama	1.69	2.71	2.89	6.64	6,647
Arkansas	0.95	1.54	1.65	7.14	3,795
Delaware	0.33	0.26	0.31	19.23	713
Florida	3.36	3.61	4.04	11.91	9,292
Georgia	2.26	2.93	3.45	17.75	7,935
Kentucky	1.59	2.10	2.46	17.14	5,658
Louisiana	1.79	3.10	3.19	2.9	7,337
Maryland	1.93	1.78	2.02	13.48	4,646
Mississippi	1.09	2.59	2.35	-9.27	5,405
North Carolina	2.50	3.14	3.8	21.02	8,740
South Carolina	1.27	2.06	2.21	7.28	5,083
Tennessee	1.93	2.45	2.92	19.18	6,716
Virginia	2.29	2.42	2.93	21.07	6,739
Washington, D.C.	0.37	0.62	0.46	-25.81	1,058
West Virginia	0.86	1.07	1.29	20.56	2,967

Table 29 (Continued)

PERCENT OF TOTAL POPULATION, OF ALL LOW-ACHIEVING STUDENTS, AND OF NEW DOLLARS RECEIVED UNDER PROPOSAL C (BY STATE)

Column (1) States	Column (2) Percent of Total Population (1970)*	Column (3) Percent of All LEA Title I Allotments for FY77†	Column (4)§ Percent of All LEA Allotments Under Proposal C‡	Column (5) Percent Change Between Columns (3) and (4)	Column (6) New Dollars Received Under C (in thousands)
West	(26.36%)	(24.49%)	(22.94%)	(-6.33%)	($52,762)
Alaska	0.15	0.21	0.13	-38.1	299
Arizona	0.88	0.95	0.80	-15.79	1,840
California	9.82	8.46	7.04	-16.78	16,192
Colorado	1.09	0.90	0.87	-3.33	2,001
Hawaii	0.38	0.33	0.27	-18.18	621
Idaho	0.35	0.25	0.31	24	713
Kansas	1.10	0.80	0.86	7.5	1,978
Montana	0.34	0.32	0.31	-3.13	713
Nebraska	0.73	0.55	0.60	9.09	1,380
Nevada	0.24	0.13	0.17	30.77	391
New Mexico	0.50	0.81	0.63	-22.22	1,449
North Dakota	0.30	0.28	0.30	7.14	690
Oklahoma	1.26	1.23	1.18	-4.07	2,714
Oregon	1.03	0.89	0.74	-16.85	1,702
South Dakota	0.33	0.35	0.34	-2.86	782
Texas	5.51	6.35	6.67	5.04	15,341

Table 29 (Concluded)

PERCENT OF TOTAL POPULATION, OF ALL LOW-ACHIEVING STUDENTS, AND OF NEW DOLLARS RECEIVED UNDER PROPOSAL C
(BY STATE)

Column (1) States	Column (2) Percent of Total Population (1970)[*]	Column (3) Percent of All LEA Title I Allotments for FY77[†]	Column (4)[§] Percent of All LEA Allotments Under Proposal C[‡]	Column (5) Percent Change Between Columns (3) and (4)	Column (6) New Dollars Received Under C (in thousands)
Utah	0.52%	0.34%	0.44%	-29.41	$1,012
Washington	1.67	1.21	1.14	-5.79	2,622
Wyoming	0.16	0.13	0.14	7.69	322
Total	100.02	100.01	100.00	N.A.	230,000

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[*] Source: Reference 6.

[†] Source: Reference 7.

[‡] Source: Reference 8. Total dollars allotted to local educational agencies in the 50 states and Washington, D.C., under Part A were used. Total excluded dollars allotted to U.S. Territories and the Department of Interior. "Department of Health, Education, and Welfare, Office of Education, Elementary and Secondary Education Act of 1965, P.L. 89-10 As Amended, Title I, Assistance for Educationally Deprived Children, Allotments for Fiscal Year 1977."

[§] It may also be convenient to recognize the numbers in Column 4 as an estimated percent of all low-achieving students.

current funds. Seen from this perspective the changes would not be inconsequential at all.

Even more striking are the changes in funds allocated to individual states if the entire Title I budget were to be redistributed in this manner. A total of 30 states would improve their position, but 21 states would be worse off. The most dramatic gains would accrue to New Hampshire (up 82%), Indiana (up 62%), and Ohio (up 45%). The most dramatic losses would be sustained by Arizona (down 38%) and New York (down 33%). Another 12 states would gain or lose more than 20% of their allocations.

Comparing Direct and Proxy Achievement Formulas

It is now instructive, perhaps, to look briefly at the distributional differences between low-achievement formulas based on direct vs. proxy measures. As the discussion immediately above suggests, they have rather different expected consequences on regional and subregional distribution. This is shown in Table 30.

Table 30

COMPARISON OF THE ESTIMATED EFFECTS OF DIRECT AND INDIRECT ACHIEVEMENT-BASED FORMULAS (BY SUBREGION)

Subregion	Proposal B Direct Measure	Proposal C Indirect Measure
New England	Gain	Gain
Mid Atlantic	Gain	Lose
East North Central	Gain	Gain
West North Central	Lose	Gain
South Atlantic	Lose	Gain
East South Central	Lose	Gain
West South Central	Unclear	Win
Mountain	Lose	Lose
Pacific	Win	Lose

As the table shows, the two formulas produce the same directional result in three of the nine subregions: New England and East North Central states benefit under either formula; the Mountain states do worse under either formula. In the remaining six subregions, the two formulas appear to cause changes in the opposite directions. Although in some cases the actual gain or loss may be quite small, constituents in these six subregions could be expected to feel strongly about the clear choice involved.

Targeting and Allocation for Proposal D

The target group of Proposal D, strictly speaking, is neither students nor states, but districts. That is, grants are made according to an assessment of how likely an applicant district is to plan or to install an innovative project design, on the intrinsic merits of a project already in existence in some districts, or on the general conditions of the schools within a district. Because there is no particular reason to believe that "worthy" or "ready" districts are spread evenly throughout the states, a formal state distribution formula would not be appropriate. However, experience suggests that it does not take too many years before the relative distributions to various states becomes less flexible and informal quotas are established.

It is worth recalling, too, that Proposal D is intended to rotate, over a period of years, until all districts are served. This, "imbalance" among states in the early years should be corrected later on. Of course there is no guarantee that this will happen, but it will have a better chance of being realized if specific state level formulas are not inserted in the beginning.

Summary

Each of the four options is intended to add to, not replace, federal money for compensatory education now available through ESEA Title I. Therefore we have expressed allocations in terms of a percentage increase over current Title I allocations to a district or state. Proposal A adds money directly to the Title I appropriation; consequently all districts would receive an equal percentage increase. A variant of the Proposal A formula, weighted for secondary students, would tend to direct somewhat larger percentage increases to nonurban areas and somewhat smaller percentage increases to urban areas.

Proposal B distributes money within states according to a low-achievement criterion. In general, it would produce much larger increases in big city and suburban districts than in medium-sized cities and rural districts. The choice of a restricted (low) achievement would particularly benefit big cities. Important exceptions to this pattern are found in the Pacific and Middle Atlantic subregions.

Proposal C allocates money to states by using a statistical proxy for low achievement, rather than a direct test. Overall, its distributional pattern is similar to that of Title I in FY1977. Several exceptions are worth noting, however. In particular, New Hampshire, Indiana, and Ohio would receive a much larger, and Arizona, Pennsylvania, and New York a much smaller, proportion of Proposal C money than of the Title I funds.

No systematic formula is required by Proposal D.

Finally, these simulations can be used to suggest the principal effects of using an achievement criterion to distribute all the Title I money. The principal effect would apparently be to move money into large cities and away from rural areas. Districts with high concentrations of minority students or low concentrations of families with incomes under $4,000 would also do better financially with an achievement criterion than a simple poverty criterion. Perhaps most important, the use of a single national achievement criterion would tend to send more Title I money into Northeastern and Pacific states. Since these findings contradict earlier studies, we recommend further analysis.

XVI CONCLUDING REMARKS

More than a decade ago, the Elementary and Secondary Education Act of 1965 was created to assist schools in providing the help that poor and low-achieving children needed to do better in school and better in life. Since then, progress has been made toward many of the goals of compensatory education: more than 3 million preschool and elementary-aged students now participate in special programs, while teachers, parents, and researchers are working constantly to improve these programs.

But we have also changed our notions of what to expect from compensatory education. We know now that we cannot expect a "miracle cure" in the first or second grade that will change a student's school life forever. Instead, we will have to provide appropriate help to many students for several years if genuine progress is to be made. Knowing this, it is especially unfortunate that one group of students has been systematically excluded from compensatory education: intermediate and secondary students have rarely had the opportunity to participate in special programs that would improve their basic skills, despite the very clear need of these students for intensive and sustained help. The inability of many young men and women to find and hold jobs that require even minimal skills in reading, writing, and calculation is only one reflection of the serious need to broaden compensatory education so as to include more students in grades 7-12. We hope that, at the least, this report has convinced the reader that these students need and deserve help.

We have also tried to acquaint the reader with the research that points to adolescence as an important time for learning and to describe some ways that are already known for providing help to low-achieving adolescents. Research and experience suggest that students are most likely to benefit from special help when it can be planned to cover more than a one-year span, when individual students are evaluated longitudinally, when projects are designed to suit the special mental and social characteristics of adolescents, and when existing school staff are well trained and involved to a high degree.

Finally, we have tried to show that helping these students, and providing federal leadership and money for this purpose, does not depend on holding any special political point of view. The four specific proposals described here cover a very broad spectrum of political and philosophical perspectives, yet any one of them could provide a great deal of help, and all are within the scope of present national resources. Moreover, any of these proposals can be initiated without reducing the money or attention now spent on younger students. The reauthorization of ESEA provides a unique opportunity for discussing, debating, and changing compensatory education policy.

One step remains. The Congress, the administration, educators, interest groups, parents, and even students themselves are going to have to decide whether to help adolescents, and if so, how.

Appendix A

PROVISIONS IN STATE LEVEL DOCUMENTS REFLECTING THE EARLY GRADE POLICY

Appendix A

PROVISIONS IN STATE LEVEL DOCUMENTS REFLECTING THE EARLY GRADE POLICY

The findings with regard to state policies are based on two kinds of documents: state Title I guidelines and state Title I evaluation reports. Although the former are not available from all states, we were able to obtain 38 of them. The EPRC file of state reports is complete through FY1974, and partial through FY76.

In the documents we received upon our request for "state guidelines," we could discern an early grade policy for 14 states and a policy of neutrality in one state. We could not discern any policy at all from the balance of the documents. For this latter group and for states that had not sent guidelines, we turned to the evaluation reports to obtain the balance of the information reported in Chapter IV. Some states may reflect a heavy concentration of services at the lower grades, although no explicit policy statements could be drawn from the documents available to us. In categorizing states, we attempted to be as conservative as possible in interpreting the documents.

The state policies are frequently found under "state priorities" for the provision of services under Title I, or as positive assertions of the way in which Title I funds can be most effectively used (for example, the "prevention versus remediation" proposition). The provisions often occur in conjunction with the federal requirement that Title I services be concentrated and with regard to the needs assessment.

We sought to obtain the most recent information available from the states. It must be pointed out, however, that several states indicated an intention to revise their guidelines upon final adoption of the March 1975 proposed regulations (although the early grade policy was not specifically mentioned as a provision scheduled for such change). Any changes in state policy or practice required by 1974 Amendments to Title I (P.L. 93-380), therefore, may not be reflected in the documents available to us. This list is not exhaustive, but we do believe it provides a fair representation of the official positions of various states.

Provisions of State Title I Guidelines

These provisions express a policy favoring early grades:

California (1974)*[1]

"3934. Section of Schools and Students ....
(d) ESEA Title I .... In all cases when categorical aid funds are insufficient to serve all eligible children, the youngest eligible children shall be the first served ....

"3938. Concentration of Services. School districts maintaining programs under this Chapter shall, unless specific categorical funding sources require otherwise, give first priority for providing additional services to eligible preschool and elementary students, and then to intermediate and secondary students that received categorical services in feeder preschool and elementary school programs."

Connecticut (1975)[2]

"The best compensatory education efforts tend to concentrate services on children in the first years of school ....

"Compensatory programs should be aimed first toward children in the earliest years of schooling or before they enroll in school. More can be accomplished in early skill learning as a preventative measure than in upper-grade remediation ...."

Georgia (1975)[3]

"Levels of Priority Objectives for Instructional Activities
Activities supported by Title I funds shall be directly related to the first, second and/or third level priorities described below ....

"First Level of ....
Develop skills, knowledge and attitudes in preschool children ....

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*For guidelines, the date is a publishing or release date.

> Develop the reading skills, ... at the early childhood and primary levels ....
>
> "Second Level of ....
> [Similar language re] upper elementary and middle childhood levels ....
>
> "Third Level of ....
> [Similar language re] ... secondary school level ...."*

Kansas (Undated)[4]

"In view of the necessity for limiting the number of children to participate together with evidence concerning the questionable results of remedial efforts in the upper grades, it continues to be the policy of the state Title I Office to encourage projects that focus on early intervention and prevention.

"Selection of children for participation in projects is accomplished through the needs assessment. Children in kindergarten through grade three, with serious multiple needs are selected first. Where funds are available in relation to pupil needs, children from grades four through six may be selected, again on the basis of severity of need."

Maine (1975)[5]

"Grant funds may be used in grade levels K-8 .... Specific projects might be special opportunity classes for pupils who need help in mastering basic skills; early intervention programs; or special remedial classes."

Massachusetts (1974)[6]

"Federal policy advocates concentration of funded [sic] on a limited number of children in a limited number of eligible areas. Massachusetts recommends further concentration of funded programs on the early childhood category (preschool through grade 3).

"Evaluations revealed that improved program quality included the following basic patterns:--Priority groups identified among eligible children and then selection further refined to focus on only particular grade levels or special need categories ....

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*Note: p. 25 of Georgia's guidelines requires funds to be provided in "ascending sequence" at the following levels: PreK-3, 4-7, 8-12.

"[A 1970 report by the state advisory council] ... declared: 'Research findings ... point out ... early experiences are crucial to later learning.' .... Little wonder, therefore, that the report came up with early childhood education as its top priority .... [The report concluded] We ... recommend giving priority to the prevention of learning difficulties rather than on remediation.

"Data that continue to pile up since that report was assembled warrant the state's continued emphasis on early childhood education programs as its first priority. The accumulated information reiterates these earlier findings:

> --Children learn at a spectacularly fast rate in their earliest years.
> --Educationally deprived youngsters who are exposed early to educational opportunities have a good chance of catching up scholastically, at the kindergarten or first grade level, with their middle-income peers ....
> --About 50% of all [an] adult's mental development is achieved by the time he is 4 years of age, another 40% by the time he is 8.
> --Strictly remedial education is not producing significant results of lasting value.
> --Children come closer to achieving their maximum intellectual potential when they receive proper stimulation during their most formative years--2 to 6 years of age."

Michigan (October 1975)[7]

"The selection of students for Title I programs shall be based on a comprehensive assessment of needs by the local school district with appropriate documentation .... Predicated upon the findings of the needs assessment: a. The first priority for use of Title I funds shall be for pre-primary (PreK and K) and elementary education (grade one through grade six); and b. The second priority for use of Title I funds shall be for students above the sixth grade.

"A district may move to the second priority if its needs assessment demonstrates that this need is greater than the first priority or the first priority has been or is presently being met."

Minnesota (1974)[8]

"Applicant school districts are reminded that project applications must also be consistent with priorities established by the State Title I Office which include kindergarten through grade three and grades four through six, and pre-school. Schools ... should ....

"2) complete a needs assessment survey for all children in the grades to be included in the project, ...

"Selection of Project Participants .... The law requires that concentrated services be provided to a limited number of the most seriously educationally deprived. In view of the necessity for limiting the number of children to participate together with evidence concerning the questionable results of remedial efforts in the upper grades, it continues to be the policy of the State Title I Office to encourage projects which focus on early intervention and prevention .... Children in kindergarten through grade three with serious multiple needs are selected first. Where funds are available in relation to pupil needs, children from grades 4, 5, and 6 may be selected, again on the basis of severity of need ....

In general, no secondary school programs will be funded unless the district's comprehensive needs assessment indicates that there are no eligible children in K-6 or that all eligible children in K-6 are already receiving effective supplementary educational assistance as demonstrated by objective evidence. Such evidence must be included in the application for secondary programs .... Secondary school programs, now in operation, must prove that at least 50% of [their] Title I participants made at least one month's gain for every month they were in the Title I program or the next year's Title I secondary program will not be approvable without a drastic program change ... evidence concerning their appropriateness and effectiveness must be included in the application for renewal ....

"Staffing Title I Projects .... In selecting Title I staff members, priority should be given to teachers who have training and experience in early childhood and primary grade education and a record of successful teaching experience with educationally deprived children."

Missouri (1975)[9]

"Policy No. 15: Early Childhood Education .... The general need for early diagnosis and for compensatory educational services for preschool children in predominantly low-income areas is widely recognized .... Schools should definitely consider the needs of prekindergarten children ... in planning their Title I programs .... The needs of children in early elementary school grades should be carefully assessed .... Schools should identify the needs of children in the early elementary school grades to preserve and build on progress they have made in Head Start and Title I pre-kindergarten classes."

New Jersey (1976)[10]

[General Needs Assessment--Introduction]
"The SEA requires a comprehensive needs assessment to be conducted for all children who reside in eligible attendance areas and will be enrolled in Grades one through six only. However, if previous assessments indicate a need for projects above grade 6, assessment data must be completed for all students residing in eligible attendance areas, that will be enrolled in grades one through twelve."

New York (1973)[11]

"Particular attention needs to be focused on pupil performance in grades 1-6." [Prior provision: "emphasis should be on programs for grades 1-3].

South Dakota (Undated)[12]

"State and Federal evaluation reports have indicated that Title I funds are most effectively utilized when concentrated at the early elementary level. Current funding will not allow sufficient concentration of funds to effectively serve all eligible children; therefore, the SEA is discouraging projects involving children above grade six."

Vermont (1973)[13]

"The State Department staff invites you in this fiscal year to: ... b. place emphasis on the needs of pre-schoolers and on children [in] the primary school who exhibit learning deficits.

"Objectives ....
1. To provide technical assistance required by LEA's in the assessment of local needs and the development of priorities with particular emphasis on:
    a. early childhood education ....

"Principles of Operation ....
    H. Change in Grade Level Participation--It is the policy of the Title I State Agency to strongly encourage the development of Title I projects which place major emphasis on meeting the needs of educationally disadvantaged children at the preschool, primary, and lower intermediate levels."

West Virginia (1976)[14]

"Primary emphasis in the program should be in the elementary grades. The SEA will approve new programs at the secondary level only upon the most convincing evidence that they are likely to be especially effective in reducing educational deficiencies and if the elementary program is of sufficient scope to provide for these identified needs."

These provisions imply a policy favoring early grades.

Nebraska (1975)[15]

"The minimum grade levels to be assessed are 1-6 and/or any other grades included in the project."

Oregon (1975)[16]

[Following a reprint of the PG44 provisions describing the likelihood of greater success with children in preschool and the early grades, the guideline contains the following:]

"Scope .... Unless there are special reasons for concentration on certain grade levels the program should be available to children at various grade levels."

This provision expresses a policy of neutrality among grades.

Pennsylvania (1975)[17]

"PDE takes no official position on the priority for particular groups of pupils such as preschool, early elementary, later elementary, or secondary. The comprehensive assessment of needs, if properly conducted will bring the services to those children with the greatest need, but it must be remembered that within certain school groupings it is illegal to 'skip' an eligible school attendance area with a higher concentration of low-income children in favor of one with a lower concentration."

Provisions of State Title I Reports

These provisions express a policy favoring the early grades.

Arkansas (1974)*[18]

"A surprising fact is that the average gain[s] made by students in grades ones, two, and three are not any higher than gains made in other grades .... Typically greater gains are made in the primary grades ....

"Nearly one-third of all students in Title I programs are enrolled in the secondary school. It would seem more profitable to focus practically all remedial programs at earlier grade levels, as a higher percentage of students achieved the [local education agency] program objectives at those levels."

Indiana (1972)[19]

"LEA's were encouraged to concentrate Title I funds on early childhood education and basic skills subjects in lower grades."

Louisiana (1974)[20]

"It is gratifying to note a marked increase in the number of prekindergarten and kindergarten children .... Activities for younger children help them in overcoming as quickly as possible the handicaps which cause educational deprivation."

Maryland (1974)[21]

"The primary focus of Title I projects in Maryland is on reading readiness and comprehension in pre-kindergarten to grade three. This concentration on reading and early childhood is in line with priorities designated by the Maryland State Board of Education and reflects the belief of the State Title I staff that early intervention or prevention, with a strong program in basic skills, is a key to any effort to compensate for the educational disadvantages associated with poverty."

Missouri (1974)[22]

"The concentration of Title I activities is heaviest in grades 3 and 4; the general concentration being in grades 2 through 6. This is an adequate approach to offering special services to those students who may not always be the most in need but certainly are in a stage of their education span where additional efforts will do the most good."

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*Dates are for school years reported on, rather than publishing or release date.

New Hampshire (1974)[23]

"During the program year 1973-74 emphasis continued to be focused upon the prevention of student failure in the early years rather than remediation in the later grades."

North Carolina (1974)[24]

"The state staff has determined that the following activities should have the highest priority:

- Lower elementary grade education
- Developmental activities in basic skills
- Parental involvement
- Planning and evaluation."

Ohio (1974)[25]

"Title I activities in Ohio are directed toward young children ... following the adage "An ounce of prevention is worth a pound of cure."

South Carolina (1974)[26]

"Title I projects are serving more children at the elementary level (K-6) than at the secondary level (7-12). This is consistent with the state philosophy [that] emphasizes compensatory programs which are preventative rather than remedial."

Tennessee (1973)[27]

"There is a pervasive opinion that programs for younger children have more payoff in later years. The school systems in Tennessee have responded programmatically to these well-established attitudes."

Texas (1974)[28]

"One of the stated objectives of the Title I program, as administered in Texas, was to serve a greater percent of elementary level pupils than secondary level pupils, in the hope that early treatment of educational problems would result in a reduction of need as the pupil proceeded through an educational program."

Virginia (1973)[29]

"Greater emphasis has been placed on the lower elementary grades with a corresponding decrease in emphasis on high school programs."

Wisconsin (1973)[30]

"School districts have been encouraged to serve students in the early elementary grades. An analysis of student enrollment by grade level showed that a priority is being placed on serving early elementary students."

These provisions imply a policy favoring the early grades.

Alabama (1974)[31]

"Each year the programs have shifted more and more from a remedial program to a preventative program, beginning with preschool in many systems."

Montana (1974)[32]

"It seems the older the children, the more difficult it is to get them to participate in the program. Hopefully, with continued Title I programs over the years there may be no need for Title I for high school age children."

This provision expresses a policy of neutrality among grades.

North Dakota (1974)

"Students at the junior-senior high age should not be excluded in priority of need selection."

Appendix B

DESCRIPTION OF DATABASE AND PROCEDURES USED IN CHAPTER VI

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DESCRIPTION OF DATABASE AND PROCEDURES USED IN CHAPTER VI

Description of Title I Reports

The Office of Education has required in the past that each state submit an annual report of its Title I activities. SEA's in turn request this information from their LEAs (usually local school districts). Just as our study is based on highly variable state reports, those state reports are based in turn on the highly variable information submitted by the LEAs. In a few states, fairly uniform evaluation procedures have been requested of the LEAs by the state agencies, but in many states no uniformity is attempted. Once they have collected all the data, the SEAs sift and compile the information into their annual evaluation reports. A typical state report includes sections on:

(1) Participation and financial information and activities of the SEA.

(2) An assessment of student needs and the local objectives to emerge from this assessment.

(3) Evaluation methods and program effect on educational achievement.

(4) Dissemination activities.

(5) Coordination with other federal programs.

(6) Parent involvement and advisory councils.

(7) Inservice training.

Summer school information and nonpublic school participation, expenditures, and achievement data are sometimes integrated into the above sections, sometimes reported separately, and sometimes not mentioned at all.

The section on evaluation of achievement usually included some, but not necessarily all of the following information: standardized tests used, methods used to calculate and report gains, methods of evaluation other than standardized tests, pretest-posttest intervals, problems encountered by the SEA and the LEAs in the evaluation, and, occasionally, prior average yearly gains, IQ scores of Title I students, and factors affecting achievement. Most evaluation sections also included achievement data from standardized tests.

The need for evaluation of educational achievement has grown faster than the number of educators trained in evaluation techniques, and the Title I reports reflect this gap. Some state evaluations have been directed and compiled by highly skilled evaluators, others reflect a more limited knowledge of evaluation, and still others are put together by small, overworked SEA staffs who barely have the time and resources to fulfill the minimum requirements of the legislation. Skill in evaluation techniques is not the only limiting factor. Many states would like to conduct other kinds of evaluations, but find themselves with too little money and too few staff to carry them out. Although SEA and LEA reporting procedures improved over the period covered by our study, substantial improvement is still needed.

Our study divided the state evaluation reports into two categories: (1) those that include standardized achievement test data in grade equivalents by grade level,[*] and (2) states that report data in other than grade equivalents or report little or no test data. The latter were not used.

State Reports Used in This Study

The data that we did use can again be divided in two groups: (1) reports that present achievement gains in average monthly gains, and (2) reports that present what we termed "program gains." Average monthly gains are derived by subtracting the pretest from the posttest and dividing this difference by the length of the test interval. For example, if a grade 3 class average pretest was 2.3, average posttest was 3.1, and the interval between tests was 7 months, the average monthly gain would be 1.1 (3.1 - 2.3 = 0.8 ÷ 0.7 = 1.1). Program gains are derived by simply subtracting the pretest from the posttest; in the example above the program gain would be 0.8. To make the data comparable for the state-to-state aggregations used in this study, we converted program gains (where given) to average monthly gains. (In some cases the test interval was given in the state report; in others we talked with the SEA Title I evaluators to determine the interval.)

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[*] Two states reported gains only for their most effective projects; these data were omitted from all analyses.

In addition to the above distinction, the states reported gains in the following ways:

(1) The state aggregated test data across districts and tests and presented a statewide mean gain by grade level.

(2) The state aggregated across districts and presented mean gains by grade level by test.

(3) The state aggregated across tests and presented gains by grade level and by district.

(4) The state aggregated data in any of the above three ways, usually the first, and presented data by ranges of gain (gain reported in number or percentage of students achieving varying degrees of gains. A typical selection of ranges of gain would be: 0-0.7, 0.71-1.00, 1.01-1.50, 1.51 and above).

A number of states did not present statewide means. In several states, we aggregated the data scross school districts. In other states, we had to aggregate across different tests. Occasionally, we had to aggregate over both district and type of test. Ten state reports presented their results in ranges of gain rate, e.g., a state would report how many students had a gain rate of less than 0.7 month in reading achievement for each month in the program, how many students had a rate between 0.71 and 1.00, between 1.01 and 1.50, and over 1.51. We were able to calculate a statewide mean by the following procedure: estimate the mean of each range by calculating the range's midpoint. (The midpoint, 0.85, of the range 0.71 to 1.00 was used as the estimate of the range's mean; 0.35 was used as the midpoint--the mean--of the range of scores below 0.7; and 1.75 was used as the midpoint--the mean--of the range above 1.5. Zero was always used as the endpoint of the lowest range and 2.0* was used as the endpoint of the highest range.) The estimated mean was then multiplied by the percentage or number of students in that range. An average of these weighted means was then calculated. This average became the statewide mean at each grade level used for that state. Several states reported means for a grade as well as the number or percentage of students in each range. In these states we were able to verify the procedure by calculating a statewide mean from the ranges and comparing this mean to the reported statewide mean. These comparisons showed little or no difference between the mean reported by the state and the mean calculated from the ranges.

The reporting method for each of the 33 states that were used in this study can be seen in Table B-1.

State Reports Not Used in This Study

State reports that did not report the results of standardized achievement tests in grade equivalents were not used in this study. A number of these omitted reports were well done: the numbers of children tested were high, they were competently written, and their authors were aware of evaluation problems and methods. We regretted being unable to use their data.

Some of the omitted reports contained no data from standardized tests. These reports often presented "systematic measures," meaning students' achievement was usually reported in terms of varying levels of

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*Wisconsin was an exception to this rule since they actually reported ranges much more extensively than other states.

Table B-1

REPORTING METHODS OF STATE REPORTS INCLUDED IN THIS STUDY

State	Average Monthly Gains				Program Gains			
	Statewide Mean	Ranges of Gain	By Test	By District	Statewide Mean	Ranges of Gain	By Test	By District
Alabama					71	73[*]	72, 73[*]	
Arizona		72, 73					71	
California	72,[*] 73[*]	71, 72, 73						
Delaware							72[‡]	
Florida		73						
Hawaii						73[†]		73
Idaho							71	
Iowa					72, 73		71	
Kansas	72,[*] 73[*]	72, 73	72				71	
Kentucky					73			
Maine	72[*]	72						
Maryland		73[*]	71[†]	71, 72, 73				
Massachusetts	71,[*] 72,[*] 73[*]	71, 72, 73	72, 73					
Michigan[§]	71, 72, 73							
Minnesota		72, 73						
Mississippi								71
Missouri						73[*]	71, 72, 73	
Nebraska					71,[*] 72,[*] 73[*]	72, 73	71, 72, 73	
New Jersey		72						
No. Carolina							71, 72	
No. Dakota		72			73[*]	73	71	
Pennsylvania	71, 72, 73							
Rhode Island	71, 72, 73							
So. Carolina			72, 73				71[‡]	
So. Dakota	73						72	
Texas[**]		72,[†] 73[†]		71, 72, 73				
Utah	73[*]			72, 73	71			
Virginia			73					
W. Virginia								71, 72, 73
Wisconsin	71	72,[*] 73	72					
Wyoming					72[*]		71, 72, 73	

[*] Data for one year were presented in two (or more) ways (e.g., Alabama 73 is both by categories of gain and by test).

[†] Data were presented in a combination of two categories (e.g., Hawaii 73 presented data in a format where mean gains for districts were reported by categories of gain).

[‡] Data were from one district and one test.

[§] Michigan reported by "type of component" (component meaning an instruction method), e.g., small group instruction, tutorial; we aggregated across types of components.

[**] In all three years, Texas grouped data by size of district (i.e., over 35,000 average daily attendance, and under 35,000 ADA). In 1973, Texas also reported by method of instruction (combined with ranges of gain and district size).

success, e.g., "very successful," "somewhat successful," "not successful." The measures used to determine these levels of success varied, but often included teacher-made tests, teacher observations, and criterion-referenced tests, and were sometimes used in combination with standardized test data (not presented) to determine success levels.

Other omitted state reports contained primarily narrative information or case studies, usually on a county-by-county basis. Some of them had a sprinkling of data but usually reported extremely small sample sizes (Ns) and sometimes used classrooms rather than individual students as the unit of counting.

Some of the omitted reports did contain data on the results of standardized testing. However, these data were not usable because either they were not reported in grade equivalents (e.g., results were reported in stanines only), they were aggregated across several grades, or the data were only from the state's most successful projects.

Sample Sizes

State reporting procedures are improving in one final area as well: the percentage of Title I reading participants for whom scores are reported. We have already noted that an increasing number of state reports include reading achievement results in grade equivalents by grade level. Of these states, the percentage reporting on over 50% of the children participating in reading programs has increased yearly from 1971 to 1973. The following tabulation illustrates this trend:

	School Year		
	1971	1972	1973
States reporting reading achievement results by grade level	22	27	28
States reporting on over 50% of reading participants	7	14	19
Percentage	32	52	68

Thus, in school year 1972-73, over two-thirds of all states reporting achievement results by grade level reported results for more than 50% of their reading population. Of course, the 50% criterion is only an arbitrary standard and by itself does not insure that the scores reported by a state will be representative of that state's Title I reading population. Nevertheless, data for large (nonrandom) samples are generally more reliable than data for small (nonrandom) samples; in this context, we consider the 50% criterion to be a useful benchmark against which the state reports can be measured.

When we consider all Title I reports, including those with achievement data averaged over grades, this improvement is equally apparent. From 1971 to 1973, 24 states increased the sample size (percentage of participants) for whom scores were reported, four states reported on either a random sample or on all their children in all three years, and only six states decreased the size of their sample during this period. Of this last group of six states, in one case the decline was attributed to installation of a new data-processing system, and in another case, even with the decline, the 1973 report included data for 52% of the Title I reading population.

We stated earlier that the general quality of the state Title I reports was not high. Despite this overall assessment, the trend in state reporting procedures is an encouraging one: dramatic improvements have been made in the last three years, and we are now close to the point where we can speak with confidence about the effectiveness of Title I reading programs.

Sample Weightings

The analyses are based on the sample means from individual state Title I reports. These sample means may be considered as being obtained either from a national school population or from a population consisting of 50 state school populations. This report has treated the state sample means as if they were obtained from a stratified sample, where each state represented a unique stratum. Our rationale for this decision was based on the results of the Friedman analysis of variance of ranks. However, it can be argued that the ESEA Title I program is a national program, and that our data should be considered as samples from a national school population.

If repeated samples, without replacement, are drawn from a single population, the population mean is estimated by an unweighted average of the sample data, i.e., by a sample mean. When we consider the means in the state Title I reports as being means of repeated samples without replacement taken from a single population, then they should be weighted according to their sample size. (When more than one sample is drawn, without replacement, from a single population, the sample mean may be calculated by taking a weighted average of the sample means, basing the weighting on the samples' sizes.)

If samples are drawn from each stratum of a stratified population, the population mean is estimated by a weighted average of the means, where each sample mean is weighted by the population of the stratum from which the sample was drawn. When we consider the means in the state Title I reports as being means of a stratified population, then these means should be weighted on the basis of their state populations.

The results of the two possible weightings of the state sample means, by year, are shown in Table B-2. In 18 of the 36 comparisons the results are identical, and in 16 of the comparisons the results differ by only 0.1. Thus, in only two of the comparisons do the results of the weighting differ by more than 0.1, and in each of these cases, the sample means are based on a very small number of states.

Other Samples

The quality of the data in state Title I reports is not always high. Other ways of looking at the data might give different results or might show different trends. We therefore decided that the data should be examined in as many ways as possible. One alternative approach to the data was to form additional samples. The national sample reported used

Table B-2

COMPARISON OF WEIGHTINGS OF STATES' AVERAGE MONTHLY GAINS

	Grade											
	1971											
	1	2	3	4	5	6	7	8	9	10	11	12
Wt x sample	0.8	0.9	0.8	0.9	0.8	0.8	1.1	1.0	1.1	1.0	1.2	1.5
Wt x state population	0.9	0.9	0.9	1.0	0.9	0.9	1.0	1.0	1.2	1.1	1.4	2.0
	1972											
Wt x sample	1.0	1.0	1.1	1.0	1.1	1.0	1.1	1.1	1.3	1.3	1.3	1.3
Wt x state population	1.0	1.0	1.1	1.1	1.0	1.1	1.2	1.1	1.3	1.4	1.4	1.5
	1973											
Wt x sample	1.0	1.1	1.1	1.0	1.1	1.1	1.1	1.2	1.3	1.2	1.3	1.3
Wt x state population	1.0	1.1	1.0	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.3	1.2

Table B-3

MEAN GRADE-EQUIVALENT GAIN RATES IN COMPENSATORY READING PROGRAMS REPORTED BY INDIVIDUAL STATES, COMBINED BY GRADE GROUP 1970-71

State No.	Grade Group		Comparison of Rates
	1-3	7-9	
3	0.93	1.33	+
5	0.73	0.97	+
16	1.13	1.2	+
17	1.05	1.23	+
25	1.1	0.9	-
26	0.77	1.0	+
34	0.97	0.97	=
35	0.7	0.85	+
40	1.4	2.67	+
44	0.7	0.75	+
45	0.8	3.2	+
49	1.0	1.2	+
50	1.1	1.27	+
		# +	10
		# -	2
		# =	1
		Total	13

Key:

+Combined gain rates of grades 7-9 higher than that reported in grades 1-3.

-Combined gain rates of grades 7-9 lower than that reported in grades 1-3.

=Combined gain rates of grades 7-9 equal to that reported for grades 1-3.

only data from states that reported reading achievement gains by grade level. This sample represented a reasonable compromise between size and quality. Obviously it would be possible to construct larger samples by using lower-quality data or smaller samples by using higher-quality data.

The next sample, labeled "Expanded Quality Sample," includes only those states that reported data from a representative random sample or data from at least 50% of their Title I participants. The number of states meeting these criteria was 7 states in 1971, 14 states in 1972, and 19 states in 1973.

The final sample, labeled "Quality Sample," includes only states that met these same criteria in each of the three years covered by this report. There were seven such states.

Other data samples were created for later portions of the analysis. The first sample is referred to as the "National Pretest." It includes only those states reporting both program gain and pretest by grade in any given year. Thus the sample size varied from year to year.

The next sample, used in Tables 9 through 11, includes only those states that administered and reported pretests in at least two of the three years under study. There were 12 such states.

The third sample comprises states that reported gains in all three study years, reported pretests in at least two of these three years, and used a random or 50% testing sample in each of the three years.

The final sample used in Tables 9 through 11 is again a variable sample, indicating that the number of states to be included varies from year to year. States included in this sample were those reporting a pretest and using a random or 50% testing sample in the stated reporting year.

This proliferation of samples may be confusing at first, but we believe that the procedure of creating samples of increasing quality has allowed us to crosscheck our results in a sensible way. Each of the samples is constructed to meet particular statistical criteria appropriate for the specific section of analysis in which it is used.

The results of the six small samples are essentially the same as the results of the two larger samples. A confidence band with a width of 0.2 month, centered about the results of the National Sample, includes 120 out of the 144 results obtained from the small sample analyses. Thus, 120 of the 144 results differ from the results of our National Sample by no more than 0.1 month. Of the 24 results that do differ by more than 0.1, 22 of the results are based on our smallest samples (either six or seven states).

Table B-4

MEAN GRADE-EQUIVALENT GAIN RATES IN COMPENSATORY READING PROGRAMS REPORTED BY INDIVIDUAL STATES, COMBINED BY GRADE-GROUP 1971-72

State No.	Grade Group		Comparison of Rates
	1-3	7-9	
1	1.15	1.3	+
3	0.87	1.03	+
5	1.13	1.4	+
16	0.95	1.1	+
17	1.05	1.25	+
21	0.93	0.9	-
22	0.9	0.75	-
23	1.3	1.5	+
26	0.87	1.03	+
28	1.1	1.13	+
31	0.9	1.03	+
34	0.87	0.93	+
35	0.87	0.87	=
40	1.3	1.83	+
41	0.8	0.83	+
42	1.17	1.07	-
44	1.05	1.1	+
45	1.23	1.37	+
49	1.0	1.17	+
50	1.17	1.7	+
51	0.93	1.57	+
		# +	35
		# -	9
		# =	3
		Total	47

Key:

+Combined gain rates of grades 7-9 higher than that reported in grades 1-3.

-Combined gain rates of grades 7-9 lower than that reported in grades 1-3.

=Combined gain rates of grades 7-9 equal to that reported for grades 1-3.

Appendix C

ISSUES IN TESTING

Appendix C

ISSUES IN TESTING

Time and Cost Estimates

There appear to be four alternative methods for states to come up with the criterion-referenced tests that Proposal B requires.

1. Use a preexisting criterion-referenced test that has been developed by the state (e.g., Maryland, Michigan, Oregon).
2. Purchase a suitable criterion-referenced test from a test publisher (e.g., CTBS, ETS, NAEP).
3. Develop a criterion-based test from scratch.
4. Develop a criterion-based test by drawing on the resources of a federally funded technical assistance agency.

Each of these options has different cost and time parameters.

Option 1: Preexisting Test

Between 10 and 15 states now have some form of criterion-referenced state test. By 1978-79 this number may be expected to be between 15 and 20. The cost of test development would be next to nothing in such states. However, since most states now report information in terms of percentage correct on each item, even these states would need to devise a method of weighting item or subscale scores to produce the cutoff criterion required for this program. If this is done by fiat, the cost probably will not exceed a few thousand dollars. On the other hand, if the state engages in a broad effort to involve all stakeholder groups in the process of criterion setting, the cost may run to $100,000 and the time to the better part of a year.

Cost for 50 states: $5 million

Option 2: Buying from a Test Publisher

At least a small number of public and private test publishers already have developed basic criterion-referenced tests that address either school or societal competencies for the age group we have in mind. It is most unlikely, however, that any state would actually be able to buy a test without requiring some modification of objectives or items, and, again, some way would have to be found to gain public acquiescence to the cutoff competency criterion. This means that these states, too, would need time and money before the test was ready to use. Again, the cost might run to about $100,000 for adjusting objectives and creating a competency index to suit individual state public values, and between six months and one year would be needed in which to do so.

Cost for 50 states: $5 million

Option 3: Create a State Test from Scratch

About half of the participating states might be expected to prefer to create a new test, particularly if the state had neither a norm-referenced nor a criterion-referenced state testing program prior to this time. These states could be expected to take advantage of the opportunity of paying for this with federal money.

Steps in the process include:

(A) Listing separate objectives (e.g., multiplication of two-digit numbers by two-digit numbers).

(B) Reproducing objectives lists and response instruments.

(C) Distributing objectives to stakeholder groups, who indicate appropriateness of objectives, relative importance, and perceived level of difficulty.*

(D) Analysis of above information, redraft of objectives.

(E) Item writing for the objectives that have been picked.

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*This can be done by fiat, but probably will not be if federal dollars are available to pay for citizen involvement.

(F) Item checking for readability, appropriateness to age group, and so forth.

(G) Learner verification (e.g., can the skills that are tested be taught?).*

(H) Construction of multiple forms of the test.

This process, from start to finish, is likely to cost in the area of $300,000 per state and could be accomplished in two years if well run.

Cost for 50 states: $15 million

Option 4: Use Federal Technical Assistance

Typically, federal level technical assistance agencies have been a bust. In part, this is due to the fact that they were charged with doing tasks that perhaps no one could do well, least of all a central federal agency (e.g., assist with local project design). In part, too, their failure may be due to the fact that they have been given tasks that neither gained expertise nor saved money by being done centrally. If there are any tasks that such an agency could do well, they are likely to be in the nature of those that we suggest in Proposal D: producing a catalogue of objectives and items from which states may choose in constructing tests, advising on cost and time-saving techniques for constructing and administering tests, and so on.

Under this system, the federal agency would either itself do, or contract out for the steps A, B, D, E, F, and G as described under Option 3 above. In place of step C, the agency would broadly survey the states and their stakeholder groups so as to insure that the very broad range of possible state differences was included in the range of objectives. Total cost when subcontracted may be in the range of $1 million. Approximately two years would be needed to advertise, bid, and let the contract(s) and perform the work.

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* Societal function objectives are hard to verify, except by face validity. However, some or all of their verification could be built into the analysis of the first year's testing.

Certain tasks would still remain for the individual states. Principal among these is choosing from among the objectives in the catalogue and establishing the state competency criterion. This is likely to cost in the neighborhood of $100,000 per state and require at least six months to accomplish.

Total time required: two and one-half years, minimum

Total cost: $6 million

Fixed Costs, All Options

Printing, distributing, collecting, scoring, and reporting tests and test results, would cost approximately $1.50/2.00 per child per year.

Determining who is to take the test in a given state (full population, matrix of students, matrix of items, etc.), including try out, would cost between $10,000 and $40,000 per state.

	Total Costs
Test modification in 25 states that either have an existing criterion-referenced instrument or buy one off the shelf	$ 2.5 million
Independent test development in 10 states	3.0 million
Shared test development in 15 states using federal technical assistance	2.5 million
Determinations and trials of testing sample in 50 states	1.25 million
	9.25 million
Yearly test administration to total grades 7 and 10 populations	$11-16 million

Obtaining a Consensus, Weighting, and Scaling State Competency Criteria

There are three main points of consideration in setting up a measurement system for assessing functional capacities for participating in society on a state-by-state basis. The first consideration is to establish procedures to obtain a consensus of what behaviors should be assessed in a determination of competency for each particular state. The second consideration involves the creation of the measurement instrument and scaling procedures to obtain equal-interval-derived scores that will reflect the level of competency of individuals tested. The third consideration is to establish procedures for obtaining a consensus of what the criterion ought to be for a functional level of competency.

In order to obtain a consensus on the relevant behaviors for any particular state, we suggest that a catalog of potentially relevant behaviors be established either on the part of the federal government as a form of technical assistance, that such a catalog be obtained from existing lists produced by criterion test publishers or other vendors, or that some combination of lists be formed for the state to compose the catalog of potentially relevant behaviors. Once such a catalog is established, a list of significant stakeholders in this area of concern should be created by the state, and those stakeholders should be contacted and asked for their participation in forming a consensus of relevant behaviors.

The mechanics of establishing where there is consensus and where there is not can be accomplished by means of the Thurstone scaling technique. This technique allows the determination of the extent to which there is consensus on any particular behavior, and it allows the scaling of the relevance of those behaviors for which there is consensus. What is required for each respondent or participant in consensus formulation is for that respondent to rate either all behaviors or a sampling of behaviors on a multipoint rating scale moving from low relevance to high relevance judged with respect to the behavior in question. Summarizing across individuals allows the representation of the responses in terms of an index of central tendency with respect to relevance and an index of variability on the part of those responding.

Suitable consensus is judged to have occurred on those behaviors for which there is relatively low variability; where there is relatively high variability among the respondents, it is necessary to conclude that no consensus exists. Those behaviors for which there is low variability and an index of central tendency indicating high relevance are the behaviors that should be assessed in the measurement procedure for that state.

Once a consensus on the behaviors to be assessed has been obtained for a particular state, exercises for assessing those behaviors must be constructed. Ordinary test construction procedures may be employed to create such exercises. Once these exercises have been created, they should be tried out on a sample of students in the relevant age range. This tryout procedure allows for the removal of exercises that do not display appropriate psychometric properties. At the same time, the data from the exercises tried out may be employed to establish a parameterization of items and raw scores. This parameterization can be done in such a fashion that equal-interval-derived scores may be created for those sets of exercises that are assessing behaviors in a common psychological domain. These scores may be weighted and combined to form one overall equal-interval scale. The weights to be applied to the derived score subscales can be obtained by employing a modification of the consensus-forming procedures previously mentioned.

Once procedures have been established for forming an overall derived-score scale, it still remains to establish a criterion score below which individuals will be classified as not having minimum behavior competency for participating in society. A consensus for the criterion score would be difficult to obtain directly, because of the transformations necessary to arrive at the derived scores. However, the Thurstone scaling technique may be used to establish a consensus for the percentage of individuals who are judged barely capable of participation in society on an exercise-by-exercise basis. If these percentages are appropriately substituted into the formulas for creating the derived scores and the weighting formula for creating one overall scale, the resulting numerical value will be the sought-after criterion reflecting the consensus of those who had input.

In the various procedures for establishing a consensus that we have described above, responding individuals may be used who represent themselves or a larger body of stakeholders. The respondent or individuals may then be unweighted if they are representing only themselves, or they may be appropriately weighted to represent the size of their stakeholder constituency. The possibility of weighting provides for some advantage and does not entail any undue computation or analytical problems.

Estimate of States with Criterion Tests

The necessity of developing statewide criterion-referenced test instruments in all 50 states is one of the most striking features of Proposal B. This would seem like an extraordinary amount of money to be spent on test development, although if yearly budgets for phase 2 are estimated at perhaps $1 billion, test development would represent only about 1% of this. Nevertheless, $10 million is a lot of money.

The cost of test development will be strongly affected by the number of states that already have suitable, or near suitable, test instruments. Our first count found 19 states that had already developed criterion-referenced test instruments for one or more grades. They are:

Eastern Region

Connecticut has just discontinued use of SCORE and is now using items from NAEP.

Delaware has statewide criterion-referenced test developed by ETS.

Maryland is developing a criterion-referenced test.

Massachusetts has instituted a statewide assessment program in reading and math that draws on NAEP items and is administered on a random basis to 9- and 17-year-olds. It plans to do this on a continuing basis. It also plans to use NAEP items in citizenship, social studies, and writing.

New Jersey has a statewide criterion-referenced test developed by ETS.

Rhode Island has developed its own criterion-referenced test and has its own normed referenced test developed by ETS, an index of basic skills.

Maine has a criterion-referenced test in five content areas, using items based on NAEP.

Southern Region

Florida has awarded a statewide criterion-referenced test assessment program to WLC.

Georgia uses criterion-referenced tests prepared by ETS.

Louisiana uses a statewide criterion test in math, reading, and social studies, based on NAEP methods.

Tennessee employs a criterion test in reading, using NAEP items and methods.

Alabama has an NAEP-based test of science.

Midcontinent Region

Michigan has a state-owned grade 4 and 6 assessment program developed by CTB.

Minnesota uses approximately 25% NAEP items in its state assessment program. Last year, legislative approval was given to school districts wanting to develop their own high-quality assessment program.

Ohio has had its own test, which was just sold to Westinghouse.

Western Region

California has developed its own statewide assessment program using a combination of publishers' items and NAEP items.

Nevada has a statewide assessment in grades 5-7 using items from R/EAL (Reading/Everyday Activities in Life).

Oregon has developed its own statewide criterion assessment of high school graduation skills.

Washington uses a criterion-referenced test for reading and math based on NAEP.

In addition to these state assessments, a great many cities have either developed or adopted their own criterion-referenced instruments. These might act as a starting point in developing a state instrument, although obviously a great deal of adjustment would need to be done in order to make these tests suitable and acceptable to nonurban portions of state populations. We know of at least the following large city tests:

Large Cities

Eastern Region

Baltimore has a criterion-referenced test in reading for grades K-6, which was sponsored by Right to Read funds.

New York has one bilingual test that gives to Spanish-surnamed students in grades K-12.

Philadelphia has its own criterion-referenced test.

Washington, D.C., uses Prescriptive Reading Test and Prescriptive Mathematics Test developed for them by CTB (CTB owns the items).

Southern Region

Dallas has a small-scale, criterion-referenced test program in reading.

Jacksonville has its own criterion-referenced test in reading.

New Orleans was using the PRI-PMI, but lost its funding.

San Antonio uses part SCORE, plus its own reading and math.

Midcontinent Region

Chicago has developed its own criterion-referenced test in reading for grades 1-7.

Cleveland has a small, criterion-referenced test program that it developed.

Detroit has a small reading test in grades 1 and 2, but it is not districtwide.

Western Region

Denver has locally developed criterion-referenced tests in math, science, and social studies for use with commercially developed criterion-referenced tests.

Los Angeles uses the STAR criterion-referenced testing system for early childhood, grades 1-3, the SHARP Proficiency Test for grade 10 and up, districtwide, and the Developmental Reading Program.

San Diego is presently developing its own criterion-referenced tests.

Seattle uses a state-developed proficiency test for graduates, plus a criterion-referenced test in math.

Finally, at least one state has instituted a system of district-choice criterion testing to establish whether or not students can read at least at the grade-9 level, as a condition of high school graduation. Arizona districts apparently use a wide variety of instruments for doing so. In this case, there is no common test instruments, but the premise of competency testing has been firmly established, and local test instruments could shorten the developmental phase by representing a previously negotiated set of performance standards.*

Preliminary Discussion of Test Sampling

When matrix sampling is interpreted to mean selecting only a small proportion of all students who will take a given test, this procedure has the obvious advantage of reducing the costs of administration and the disruption of regular teaching and learning activities. However, if the test is to be used not only for allocating money to the districts but also for identifying participants within the districts and assessing project success, then all students will have to participate in some testing.

Another form of matrix sampling is then possible, in which no single student must answer all the items on a test. This procedure saves very little money over full testing, but does reduce the sitting time for the tests and the cost of teacher time to administer the test, which must usually be absorbed by the district. Another possible advantage is that it reduces the ease and benefit of teaching the test.

Scores derived from this second sort of matrix sampling would probably be reliable enough to use as a base for district allocations and decisions within districts regarding which schools are to receive project funds. These scores should also be sufficient to assess project success within acceptable margins of tolerance. However, the reliability of individual scores is considerably reduced, with the result that this type of matrix sampling probably does not provide the kind of unambiguous identification of participants that is needed, nor a fair and timely evaluation of individual progress.

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*We are indebted to the National Assessment of Education Progress and to the California Testing Bureau for assistance in compiling this list.

Appendix D

STATE-TO-DISTRICT DISTRIBUTION FOR PROPOSAL B

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STATE TO DISTRICT DISTRIBUTION FOR PROPOSAL B

The intent of Proposal B is to distribute funds to school districts based on their relative concentration of low-achieving students. For this purpose, low-achieving students are defined as those students scoring below the criterion level on a suitable criterion test of basic skills. Each state is to develop or buy a criterion-referenced test for the identification of low-achieving students and determine a cutoff criterion level that defines low achievement, i.e., decide upon the level of competency below which students in grades 7-12 require additional categorical program assistance. Proposal B must assume these state-developed tests and criterion levels and then specify in the law the way in which the state will allocate funds to districts.

Obviously, the formula for distribution of the funds will have different results depending on the type of criterion-referenced tests the state develops, on the criterion level it chooses, and, therefore, on the distribution of scores below the criterion level in each school district. This appendix discusses some of the issues that must be examined in determining the most appropriate distribution formula.

First, we look at two polar cases:

(1) One in which a very low criterion level is set, so that nearly all children will pass. This is referred to in the text as a restricted criterion.

(2) One in which a relatively high criterion level is set, so that a sizeable proportion of children will fail. This is referred to as an expanded criterion.

The exact level of the criterion is either of these two cases will be a function of the specific test that is developed.

Restricted Criterion Level

A low or restricted criterion is one set in such a way that those who fail could be confidently identified as being at very great risk of not acquiring the barest minimum of the basic skills required for effective participation in society. Under these circumstances, most students scoring below the criterion will need approximately the same type and amount of services and, hence, about the same funds per pupil to overcome their educational disadvantage. This is not to say that different types of treatment might not be needed: non-English speaking students, majority culture dropouts, and very low IQ students may require substantially different curricula. We are dealing with a subpopulation, however, of students all of whom can be assumed to require major assistance.

Consequently, a formula that allocated to districts approximately equal amounts per student who scored below the criterion level would appear to be appropriate. Such a formula with equal weighting for all those who scored below the criterion level would be:

$$A_{d,t} = \left(\frac{E_d}{E_s}\right) A_{s,t}$$

where:

$A_{d,t}$ = the district's allocation in period t,

E_d = the number of children in the district scoring below the criterion level,

E_s = total number of pupils in the state scoring below the criterion level, and

$A_{s,t}$ = the state's allocation in period t.

An additional modification to this approach would be to restrict grants to districts that, singly or in consortia, would receive an amount of $10,000 or more. The basis for this restriction is that at least this amount of funds is needed in each district to mount an effective program and that numbers of students less than those corresponding to a $10,000 program could probably be absorbed by the district.

Expanded Criterion Level

A high or expanded criterion level is one set to approximate the level of skills needed to function with some measure of proficiency in society, rather than at the barest survival level. A high criterion level does not necessarily mean that within the district students of only minor educational disadvantages would be served, since the criterion level for allocation to the district does not necessarily have to be the same as that used by the district focusing limited funds for students. Nevertheless, a very high criterion level does raise some issues about the most appropriate formula for allocating funds to the district, because one could plausibly argue that with a high criterion level, those barely below the level would need considerably less assistance than those far below it and should therefore be allocated less funds.

This reasoning leads to a district allocation formula based on a summation of the difference between the criterion level and students' scores. Consequently, between two districts with an equal number of students scoring below the criterion, the district with students further below the criterion would receive the greater proportion of the funds. An example of such a formula would be:

$$A_{d,t} = \frac{\sum_{i=1}^{n} (c - s_i)}{\sum_{i=1}^{N} (c - s_i)} \cdot A_{s,t}$$

where:

c = the state's criterion index,

s_i = a student score, and

n and N respectively represent district and state totals for for students taking the test.

At a practical level, the question is how the level of the state criterion will affect the distribution of the fixed amount of funds available to the state. Some guidance on this question can be gained from the Guthrie, Frentz, and Mize report (see Reference 3, Chapter XV), in which changes in allocations are determined using criteria that ranged from failing 10% to 35% of the students in the state. Chapter XV of this report discusses the findings of our similar allocation model. In brief, the relative distribution to districts of various ethnic, income and locational characteristics varies substantially with the criterion level chosen.

The degree to which it would be possible to spread funds by raising criterion levels would vary from state to state, and it should be pointed out that allocating monies to educationally disadvantaged students will necessarily spread funds more generally within the state than would a Title I income allocation. If no controls were imposed, a state that chose to do so could turn Proposal B into a general aid formula by setting the criterion level quite high, thereby spreading the money among more districts. However, this criterion level would have to fail more than 35% of the children in the state.

We suggest that the formula used to allocate funds from the state to the district level be a combination of those suggested in the discussions of both low and high criteria. The weighting given to the test results in this district would have two components. The first component is a count of the number of students failing below the criterion level; the second component is based on the distance these students are below the criterion. The weighting of the first component would be one, and the weighting of the second component would be based on the number of students in the state falling below the criterion level. For example, the weighting of a second term might be found by taking the percentage of students falling below the criterion in the state and dividing it by 15%. In this example, if the state were to find a criterion level below which 15% of the students fell, then the second term would have equal weight to the first. If the percentage falling below the criteria level were greater than 15%, then the second term would be given more weight than the first, with the opposite case occurring if the percentage falling below the criterion level were less than 15%.

Longitudinal Considerations and Performance Incentives

Both the number of children in a district falling below the criterion level and the distance below this level are expected to change over time as the result of both demographic shifts within the district and the success or failure of the district's programs. We suggest that a state might want to assess longitudinally a set of children in the program in each district, and provide increased funding for districts that gave evidence of creating successful programs for these students. The basis for this evaluation should be multiyear. By giving a multiyear focus the state would be able to define its own incentive plan and reallocate up to 10% to 15% of its monies, based on performance. Perhaps most practically the performance rewards should come out of increases in total state funding rather than in the reallocation of the amount of funds any district has received in the past, except as reflected in demographic changes.

Appendix E

SIMULATION RESULTS FOR ALTERNATE ALLOCATION FORMULAS IN PROPOSALS A AND B

Appendix E

SIMULATION RESULTS FOR ALTERNATE ALLOCATION FORMULAS IN PROPOSALS A AND B

The tables in this appendix were produced by a computer simulation model designed to estimate the distribution of new money under alternative allocation formulas. The tables are constructed to answer the following types of questions:

- Under Proposal A, how is distribution affected by weighting the poverty formula for adolescents?
- Under Proposal B, how does the distribution of money among districts change as higher (or lower) achievement criteria are chosen?
- How do the general patterns of distribution of money differ among the proposals and formulas?
- Under which proposal or formula would a particular kind of district receive the greatest proportionate increase in its available federal compensatory education dollars?

In order to address these questions, the model simulates the following situation. Suppose the administration and Congress were willing to commit to adolescents an amount equal to approximately 10% of the current (FY1978) budget--that is, about $230 million. How does the distribution of this sum differ among the two Proposals A and B and among their alternative formulas? In order to make the comparison as simple and realistic as possible, the distribution of money has been expressed, in each case, as a percentage increase over the amount that would be received from ESEA Title 1 (using the Social Security Administration Index of Poverty alone).

Districts are divided and described by five variables, each of which is described below.

Region and Subregion

For the analysis of formulas under Proposals A and B, districts were categorized by the four census regions and nine geographic divisions. For convenience in the text, we have referred to the geographic divisions as "subregions." The states constituting each subregion are shown below.

New England States: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

Middle Atlantic States: New Jersey, New York, and Pennsylvania.

East North Central States: Illinois, Indiana, Michigan, Ohio, and Wisconsin.

West North Central States: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

South Atlantic States: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia.

East South Central States: Alabama, Kentucky, Mississippi, and Tennessee.

West South Central States: Arkansas, Louisiana, Oklahoma, and Texas.

Mountain States: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

Pacific States: Alaska, California, Hawaii, Oregon, and Washington.

Size and Type of Community

Another common way to think about school districts is according to the type of community they represent. Our sample of districts was divided into seven such groups, patterned after the NAEP division of sample schools. Readers familiar with the NAEP data should note that we are dealing here with districts, not schools. These districts are divided as shown below.

Low Urban: School districts in urbanized areas of population greater than 200,000 where a high proportion of adults are either not regularly employed or are on welfare, and a low proportion of adults are employed in professional or managerial positions.

High Urban: School districts in urbanized areas of population greater than 200,000 where a high proportion of adults are employed in professional or managerial positions and a low proportion of adults are factory workers, are not regularly employed, or are on welfare.

Urban Fringe: School districts in urbanized areas of population greater than 200,000 but outside the city limits and not classified as Low Urban or High Urban.

Mixed Urban: School districts in urbanized areas of population greater than 200,000 but not classified as Low Urban, High Urban, or Urban Fringe.

Medium Cities: School districts in cities with population between 25,000 and 200,000.

Extreme Rural: School district in open country or in places with population of less than 10,000 where a high proportion of adults are farmers or farm workers, and a low proportion of adults are professional, managerial, or factory workers.

Small Places: School districts in open country or in places of population less than 25,000, but not classified as Extreme Rural.

Districts were assigned to categories corresponding to the NAEP categorization of sample schools. For convenience in reading and analyzing the tables, these seven categories are listed hereafter roughly from inner city to most rural.

Population of City

A simpler way to approach the same issue is by looking only at the population of a city in which a school district is found. Our sample of districts was divided, therefore, into the three categories described below.

Over 200,000: School districts located in a city with population greater than 200,000.

50,000 to 200,000: School districts located in a city with population between 50,000 and 200,000.

Under 50,000: School district located in a city with population less than 50,000.

Populations of cities were determined from printed reports of the 1970 Census.

Percent of Families with Income Under $4,000

The Social Security Index of Poverty used in Title I is the most commonly accepted definition of family poverty. However, another way to think about and analyze poverty is by setting a flat income cutoff and determining what proportion of families in a given area have incomes at or below this cutoff. This was done for our sample districts, as shown below:

0-10 PCT: School districts having less than 10% of families with incomes under $4000.

10 - 20 PCT: School districts having between 10% and 20% of families with incomes under $4000.

20 - 30 PCT: School districts having between 20% and 30% of families with incomes under $4000.

And so on, to

90 - 100 PCT: School districts having greater than 90% of families with incomes under $4000.

District values for the family income variable were derived from tabulations contained in the 1970 Census Fourth County (Population) School District Data Tapes.

Percent of Minority Students Enrolled

A fifth variable of importance to political analyses is the distribution and concentration of minority students. Our sample of districts was divided, therefore, into categories according to the proportion of district enrollment consisting of minority students. Categories were defined as below:

0 - 10 PCT: School districts having less than 10% minorities in their enrollment.

10 - 20 PCT: School districts having between 10% and 20% minorities in their enrollment.

20 - 30 PCT: School districts having between 20% and 30% minorities in their enrollment.

And so on, to

90 - 100 PCT: School districts having greater than 90% minorities in their enrollment.

District values for the minority student enrollment variable were derived from counts of Indian, Black, Oriental, and Spanish students contained on the Office of Civil Rights 1972 Data Tape.

Small Sample Size

Because of the rather fine gradations within some of the variables, it is inevitable that categories will occasionally have few districts, schools, or students. When this happens, the simulated distributions of money cannot be taken to be as reliable as those for larger categories. Two alternatives appear to the analyst faced with this problem. The first is to redefine the categories so that none is too small for confidence. Sensible as this procedure is, it can lead to having categories of different sizes, definitions, and shapes on different tables, and hence to confusion when comparing, for example, across subregions. The second alternative is to mark such categories in a way that alerts the reader to possible difficulties in generalization. We have chosen this method, marking such categories with an asterisk.

How to Read the Tables

Suppose $230 million were appropriated to fund an adolescent program. How would the distribution of this money vary, depending on the choices available? The tables are laid out as follows:

In Column (1) are listed the district categories for the variable under consideration. For example, in Row 1 of Table E-4 are those districts whose size and type of community is classified as Low Urban.

In Column (2) we see how much a certain type of district's allocation would increase if the Congress added $230 million to the Title I formula without any changes (that is, primarily based on family poverty). This is one option for Proposal A. Since the average increase is 10% across the board, this provides a baseline for comparison with other plans.

In Column (3) we see how much a district's allocation would increase if the same additional amount of money ($230 million) were distributed according to a formula similar to the present Title I formula, but weighted according to a district's proportion of secondary to elementary students. This is the second option for Proposal A. Because districts differ in their age demography, not all types of districts will then receive exactly a 10% increase. For example, in Column (3) of Table E-4, we see that funding under the second option of Proposal A will produce an increase of 8.9% for low-urban districts in the nation. This figure is less than the 10% baseline because low-urban districts tend to have relatively more elementary students than other districts.

In Columns (4) through (9), we see how different types of districts would gain from the distribution of the same $230 million on each of several achievement criteria. In particular, Column (4) shows how much a particular kind of district would gain if a criterion was set such that all but 5% of the nation's secondary students passed. A district that had a very high proportion of students who failed could get more money from this distribution pattern than from either of the preceding plans (that is, get considerably more than a 10% increase). Conversely, a district in which every student failed the criterion would probably get much less money under this distribution plan (that is, get an increase of less than 10%). Similarly, Column (9) shows how the distribution would change if a criterion were chosen such that almost one-third of all adolescents failed the test(s).

Of particular interest is Column (6). The number of students "counted" for distribution under this 15th-percentile criterion is just about equal to the number of students currently eligible for Title I. As such, this is a particularly useful point of comparison for a number of political purposes. For example, in Column (6) of Table E-4, we see that low-urban districts will tend to receive an increase of 11.3% over the amount they currently receive if the 15th-percentile cutoff were applied. These same districts, Column (9) shows, would receive only 7.9% if the criterion were changed to the 30th percentile.

Allocation changes under each of the formulas indicated by Columns (2) through (9) should be contrasted with the sample statistics appearing in Columns (10) through (13). Column (10) presents the percent of children in each category of school districts presently eligible (but not necessarily participating in) ESEA Title I. For example, an estimated 19.2% of children in low-urban districts are presently eligible according to Table E-4.

Column (11) tells how many districts in our sample fell into each district category.

Column (12) shows how many 13-year-old students were sampled by NAEP in districts so classified.

Column (13) displays an estimate of the percent of children represented by each district type within the geographical area tabulated. For example, approximately 5.9% of the children in the nation come from districts in medium cities. This measure is designated the "NAEP Survey Weight" since it was derived from sample weights assigned to students by National Assessment. Column (13) is important in that it provides information on the extent of the effects indicated in Columns (2) through (9). For example, although districts in the low-urban category stand to gain 14.4% with a 5th-percentile cutoff under Proposal B, these districts account for only 1.2% of the nation's children.

Note that for several reasons, some districts or students could not be classified for certain district variables. The last three (or sometimes two) rows within a table are used to indicate districts for which the value of the variable was unknown (e.g., unknown percent of minority student enrollment), districts for which the present Title I eligibility was unknown (i.e., unknown eligible), and students in private schools who were not assigned to public school districts (i.e., unknown district), respectively.

Caveats

Three caveats need to be made to the reader. First, our data necessarily compare 1970 poverty counts with 1975 achievement counts. Since the present Title I formula is based on the 1970 poverty count and will be until about 1982, this is not inappropriate. The comparisons we make here are, indeed, proper comparisons between the effects of using the most recently available district level poverty count and the most recently available district achievement count. However, the reader should be aware that a 1975 update of the poverty count shows a proportionate shift of families in poverty from Southern to Northern states during the five years since 1970. We cannot tell from the current analysis how much of the "northern-urban shift" which we attribute to the use of an achievement base can be accounted for better by a movement of poverty families from South to North. Fortunately, data bases will soon be available that can help to resolve this question.

The second caveat is that the National Assessment was never intended to be used to compare the achievement records of individual states. Therefore, sampling techniques have resulted in some states being less-thoroughly and -accurately represented than others. This is one of many reasons why we have not presented allocation analyses state by state, and why we have marked with an asterisk those subregional descriptors for which the data sample seems questionably small. This problem could be alleviated somewhat in subsequent analyses by adding 9-year-old and 17-year-old students to the combined data base. However the better, long-run solution would be to allow NAEP to construct its sample in a different way.

Finally, the reader will need to bear in mind that the real Title I formula is far more complicated than a distribution according to poverty, per se. At the federal level, children are also counted if they come from families that, were they not on welfare, would be in poverty.*
Furthermore, these "poverty counts" are adjusted according to formulas that take into account both the differences in per-pupil expenditures among states and the relative political power of certain states and

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*In 1977, approximately 8.5% of the "eligible" population came from the AFDC counts. This proportion has been higher in the past.

regions. At the state and district level, the distribution of poverty may be established by any of a wide variety of methods, including school lunch subsidies, local censuses, and the like. All of these factors mean that the distribution of Title I money is not quite the same as the distribution of children from poverty families.

Having thus cautioned the reader, we should reiterate that we have considerable confidence in the validity of the patterns of distribution shown in these analyses, particularly at the national level.

Table E-1

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

CENSUS GEOGRAPHIC DIVISION : THE NATION

CENSUS GEOGRAPHIC DIVISION (1)	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
NEW ENGLAND	10.0	9.0	16.2	14.1	15.1	15.5	15.0	14.7	8.6	20	725	3.2
MIDDLE ATLANTIC	10.0	9.1	12.2	12.3	12.0	12.1	12.4	12.7	9.3	56	2852	12.6
EAST NO. CENTRAL	10.0	9.9	13.5	13.6	14.1	14.7	14.9	14.9	8.8	91	3457	15.8
WEST NO. CENTRAL	10.0	10.4	3.9	4.5	5.5	6.2	7.3	8.3	10.5	56	1605	6.9
SOUTH ATLANTIC	10.0	10.0	10.0	9.6	9.2	8.8	8.5	8.2	22.0	42	3501	16.1
EAST SO. CENTRAL	10.0	10.3	7.0	6.7	6.8	6.9	6.8	6.7	25.3	27	1515	6.8
WEST SO. CENTRAL	10.0	10.2	10.7	10.3	10.1	9.5	9.1	9.1	18.7	37	1462	8.9
MOUNTAIN	10.0	10.9	7.7	9.3	9.6	9.8	10.5	11.1	14.3	32	896	3.6
PACIFIC	10.0	10.1	10.5	11.5	11.7	11.9	12.0	12.0	11.5	56	2382	12.1
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	53	1241	5.2
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	1757	8.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.4	470	21393	100.0

Table E-2

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : NEW ENGLAND STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	8.5	11.8	13.7	12.6	11.2	10.1	8.8	18.2	2	76*	11.2
HIGH URBAN	10.0	11.8	18.2	10.8	17.2	19.8	18.0	16.3	3.7	2	105	13.9
URBAN FRINGE	10.0	11.1	3.0	5.2	4.6	8.2	9.5	11.6	6.7	2	84*	10.2
MEDIUM CITIES	10.0	9.3	13.3	13.5	12.3	10.1	10.0	9.9	9.4	4	101	12.6
SMALL PLACES	10.0	10.8	7.3	6.6	6.9	7.5	8.5	9.3	7.7	10	359	33.7
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	132	10.9
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	73	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6	26	930	100.0

Table E-3

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : MIDDLE ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	9.2	16.2	15.2	14.0	12.2	10.8	9.8	18.0	5	303	4.0
MIXED URBAN	10.0	8.5	5.5	5.2	5.6	5.0	4.8	4.6	20.3	2	615	11.7
HIGH URBAN	10.0	12.8	18.1	15.1	13.2	12.3	12.8	14.7	3.7	11	330	10.0
URBAN FRINGE	10.0	10.8	13.4	13.9	16.0	15.2	15.7	16.0	6.0	9	387	10.2
MEDIUM CITIES	10.0	8.9	8.0	11.5	11.1	10.1	9.3	8.8	13.5	4	121	4.3
SMALL PLACES	10.0	11.2	9.7	9.5	9.7	11.4	11.9	12.1	6.8	24	1036	34.5
EXTREME RURAL	10.0	13.3	32.2	36.0	29.9	31.6	33.1	33.5	6.0	1	60*	2.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	160	4.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	528	18.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3	62	3540	100.0

Table E-4

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : EAST NORTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	8.9	14.4	12.5	11.3	9.6	8.9	7.9	19.2	2	50*	1.2
MIXED URBAN	10.0	9.0	16.0	14.3	12.9	11.2	10.4	9.8	14.3	6	609	11.1
HIGH URBAN	10.0	10.7	8.7	11.1	12.8	13.2	11.7	13.6	2.5	8	270	6.7
URBAN FRINGE	10.0	10.3	13.6	13.4	14.9	17.9	17.8	17.6	4.6	14	469	13.4
MEDIUM CITIES	10.0	9.0	8.0	9.6	8.3	7.8	7.7	8.0	7.7	7	232	5.9
SMALL PLACES	10.0	10.5	7.0	7.7	8.2	8.6	9.0	9.3	9.6	45	1591	39.8
EXTREME RURAL	10.0	9.8	9.9	9.0	8.6	8.2	8.8	8.2	9.5	9	236	5.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	8	242	5.5
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	439	11.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.8	99	4138	100.0

Table E-5

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : WEST NORTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	9.3	17.5	8.0	10.1	10.4	10.4	9.0	17.2	1	22*	2.8
MIXED URBAN	10.0	7.0	11.4	11.7	9.8	9.4	9.4	8.4	11.4	1	59*	2.3
HIGH URBAN	10.0	10.5	20.2	22.0	20.6	20.7	20.5	20.2	2.9	6	243	13.0
URBAN FRINGE	10.0	10.5	50.4	45.8	44.6	39.2	35.4	31.8	3.3	4	96*	6.0
MEDIUM CITIES	10.0	9.0	14.1	19.1	15.0	13.5	14.4	14.0	7.6	1	44*	2.5
SMALL PLACES	10.0	9.7	10.0	10.5	10.2	9.5	9.9	9.8	9.9	20	649	33.6
EXTREME RURAL	10.0	10.6	5.4	5.9	6.5	7.5	7.3	7.9	18.0	23	492	19.7
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	15	274	12.7
UNKNOWN DISTRICT	-	-	-	-	-	[illegible]	[illegible]	-	-	-	132	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	[illegible]	[illegible]	[illegible]	10.0	10.5	71	2011	100.0

Table E-6

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : SOUTH ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	8.7	11.1	11.0	11.2	11.2	11.6	11.3	25.8	3	120	2.0
MIXED URBAN	10.0	9.0	21.3	18.4	17.3	16.3	14.9	14.3	16.8	4	490	13.2
HIGH URBAN	10.0	10.6	0.0	30.5	24.1	18.1	25.1	44.1	3.9	1	33*	1.7
URBAN FRINGE	10.0	9.7	15.0	13.7	17.5	17.6	16.6	17.1	9.3	3	209	7.8
MEDIUM CITIES	10.0	9.6	9.0	8.6	8.6	8.7	8.6	8.6	23.5	6	702	20.6
SMALL PLACES	10.0	10.4	7.6	8.2	8.2	8.5	8.9	8.8	25.1	23	1836	44.6
EXTREME RURAL	10.0	11.0	16.2	17.3	16.8	15.4	13.6	13.6	32.6	2	111	1.6
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	305	8.6
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	22.0	42	3806	100.0

Table E-7

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : EAST SOUTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
MIXED URBAN	10.0	9.6	20.0	22.0	18.7	17.9	18.0	17.2	28.5	1	72*	3.1
HIGH URBAN	10.0	10.6	0.0	0.0	0.0	0.0	0.0	.9	8.7	2	96*	4.2
MEDIUM CITIES	10.0	9.0	12.7	11.3	10.4	10.5	10.2	10.2	23.3	6	495	35.4
SMALL PLACES	10.0	10.5	8.7	9.1	9.5	9.5	9.7	9.9	27.2	15	784	52.6
EXTREME RURAL	10.0	10.9	4.0	5.9	10.0	9.7	9.1	8.4	34.5	3	68*	4.0
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	12	.7
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	25.3	27	1527	100.0

Table E-8

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : WEST SOUTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
MIXED URBAN	10.0	9.5	22.1	18.2	16.6	15.6	14.4	13.7	20.4	5	320	17.5
HIGH URBAN	10.0	11.0	0.0	6.4	10.0	9.5	10.4	12.8	6.6	4	63*	4.2
URBAN FRINGE	10.0	10.8	0.0	7.4	11.0	12.1	12.2	15.5	6.8	2	105	9.9
MEDIUM CITIES	10.0	9.7	12.6	11.9	11.2	10.7	10.2	10.1	20.6	2	241	18.2
SMALL PLACES	10.0	10.3	4.2	5.7	6.4	6.8	7.5	7.6	21.4	19	672	35.7
EXTREME RURAL	10.0	9.8	10.8	9.0	8.3	10.4	10.7	10.1	20.9	5	61*	3.4
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	5	127	5.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	118	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	18.7	42	1707	100.0

Table E-9

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : MOUNTAIN STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	9.1	22.0	12.7	12.7	11.6	10.1	8.9	31.1	2	31*	3.2
MIXED URBAN	10.0	8.8	9.8	16.1	11.6	10.9	12.5	11.4	8.8	2	36*	2.0
HIGH URBAN	10.0	10.0	23.7	20.0	15.9	21.0	18.9	18.8	5.1	1	42*	11.3
URBAN FRINGE	10.0	9.2	6.4	8.0	10.9	9.9	8.0	9.7	8.6	3	80*	12.4
MEDIUM CITIES	10.0	8.0	21.4	14.9	12.4	11.9	11.5	11.6	11.1	2	125	8.8
SMALL PLACES	10.0	10.1	6.8	9.6	9.7	10.0	10.7	10.7	15.1	16	490	44.3
EXTREME RURAL	10.0	11.2	7.6	6.1	6.9	6.2	6.3	6.1	28.0	6	92	9.1
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	3	68	7.0
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	24	1.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.3	35	988	100.0

Table E-10

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS
SIZE AND TYPE OF COMMUNITY : PACIFIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	9.4	9.2	16.4	16.9	15.7	15.5	15.8	9.1	6	159	7.4
MIXED URBAN	10.0	8.8	11.1	9.7	9.3	9.0	9.8	10.0	11.0	7	607	19.5
HIGH URBAN	10.0	9.8	2.0	3.9	7.8	9.6	11.5	13.0	5.5	5	179	6.6
URBAN FRINGE	10.0	9.6	9.6	17.0	15.8	16.1	15.3	15.0	6.7	11	323	13.0
MEDIUM CITIES	10.0	10.2	12.2	11.3	10.7	11.1	11.1	11.1	11.1	6	381	11.7
SMALL PLACES	10.0	10.3	7.4	7.4	7.6	8.5	8.5	8.7	12.0	13	512	18.9
EXTREME RURAL	10.0	11.0	11.8	8.6	8.7	7.9	7.2	6.7	24.0	8	221	9.9
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	10	238	7.6
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	126	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.5	66	2746	100.0

Table E-11

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

SIZE AND TYPE OF COMMUNITY : THE NATION

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
SIZE AND TYPE OF COMMUNITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
LOW URBAN	10.0	8.8	18.5	16.9	16.1	14.7	13.7	13.2	16.5	21	761	3.1
MIXED URBAN	10.0	8.8	15.8	14.2	13.2	12.1	11.4	10.9	16.2	28	2808	11.3
HIGH URBAN	10.0	10.8	9.3	12.4	12.8	15.0	15.3	16.3	4.1	40	1361	6.9
URBAN FRINGE	10.0	10.0	12.5	16.0	16.7	17.6	18.2	18.6	6.3	48	1753	9.8
MEDIUM CITIES	10.0	9.5	9.9	9.6	9.2	9.0	8.6	8.5	18.3	38	2442	12.4
SMALL PLACES	10.0	10.5	7.3	7.8	8.1	8.6	8.9	9.1	15.7	185	7929	36.7
EXTREME RURAL	10.0	11.0	9.8	8.2	8.8	8.2	8.5	8.5	19.4	57	1341	5.7
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	53	1241	5.2
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	1757	8.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.4	470	21393	100.0

Table E-12

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : NEW ENGLAND STATES

POPULATION OF CITY (1)	PROPOSAL A POVERTY COUNT (2)	PROPOSAL A WEIGHTED POVERTY COUNT (3)	PROPOSAL B PERCENTILE CRITERION CUTOFFS 5TH (4)	PROPOSAL B PERCENTILE CRITERION CUTOFFS 10TH (5)	PROPOSAL B PERCENTILE CRITERION CUTOFFS 15TH (6)	PROPOSAL B PERCENTILE CRITERION CUTOFFS 20TH (7)	PROPOSAL B PERCENTILE CRITERION CUTOFFS 25TH (8)	PROPOSAL B PERCENTILE CRITERION CUTOFFS 30TH (9)	SAMPLE STATISTICS PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	SAMPLE STATISTICS NUMBER OF SAMPLE DISTRICTS (11)	SAMPLE STATISTICS NUMBER OF SAMPLE STUDENTS (12)	SAMPLE STATISTICS NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	8.4	13.0	14.8	12.9	11.5	10.4	8.9	19.5	1	52*	9.4
50,000 - 200,000	10.0	9.9	11.3	12.9	12.4	11.2	10.6	10.5	9.5	6	150	16.7
UNDER 50,000	10.0	10.8	7.9	6.3	7.4	8.7	9.5	10.3	6.5	13	523	55.6
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	132	10.9
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	73	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6	26	930	100.0

Table E-13

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : MIDDLE ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
POPULATION OF CITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	8.7	7.7	7.4	7.5	6.6	6.1	5.7	19.8	6	895	15.3
50,000 - 200,000	10.0	9.6	14.4	14.7	13.7	12.7	12.1	11.8	9.4	7	237	8.3
UNDER 50,000	10.0	11.3	11.0	11.3	11.4	12.5	13.1	13.5	6.2	43	1720	53.4
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	160	4.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	528	18.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3	62	3540	100.0

Table E-14

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : EAST NORTH CENTRAL STATES

POPULATION OF CITY (1)	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	9.1	15.9	14.4	13.2	11.7	10.9	10.1	12.6	9	733	14.6
50,000 - 200,000	10.0	10.0	16.0	15.7	11.6	11.6	11.0	10.4	7.2	3	78*	2.1
UNDER 50,000	10.0	10.3	7.8	8.3	8.9	9.4	9.7	10.0	8.1	79	2646	66.5
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	8	242	5.5
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	439	11.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.8	99	4138	100.0

Table E-15

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : WEST NORTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
POPULATION OF CITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	8.4	13.3	17.1	14.0	14.9	16.7	15.7	4.8	3	179	8.4
50,000 - 200,000	10.0	9.3	16.6	11.1	11.5	11.3	11.5	10.4	12.6	2	66*	5.3
UNDER 50,000	10.0	10.2	9.2	9.5	9.6	9.6	9.5	9.7	11.0	51	1360	66.2
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	15	274	12.7
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	132	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	71	2011	100.0

Table E-16

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : SOUTH ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
POPULATION OF CITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	9.3	24.0	21.1	20.3	18.6	17.0	16.1	16.5	5	503	11.0
50,000 - 200,000	10.0	9.4	8.3	8.4	8.5	8.7	8.7	8.9	20.0	16	1541	49.8
UNDER 50,000	10.0	10.9	9.0	9.6	9.5	9.7	10.0	9.9	27.2	21	1457	30.6
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	305	8.6
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	22.0	42	3806	100.0

Table E-17

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY I EAST SOUTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
POPULATION OF CITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	9.8	14.6	16.1	13.7	13.1	13.2	12.8	23.1	2	120	5.2
50,000 - 200,000	10.0	8.9	16.4	13.8	12.9	12.8	12.6	12.6	21.5	4	418	29.1
UNDER 50,000	10.0	10.4	7.4	8.2	8.7	8.8	8.9	8.9	27.2	21	977	65.0
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	12	.7
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	25.3	27	1527	100.0

Table E-18

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : WEST SOUTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
POPULATION OF CITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	9.4	16.7	14.6	13.8	13.2	12.3	12.3	19.6	6	304	17.2
50,000 - 200,000	10.0	9.9	15.5	13.8	12.8	12.1	11.6	11.3	19.3	5	329	23.3
UNDER 50,000	10.0	10.3	4.6	6.3	7.1	7.7	8.3	8.4	18.1	26	829	48.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	5	127	5.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	118	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	18.7	42	1707	100.0

Table E-19

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : MOUNTAIN STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
POPULATION OF CITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	9.4	18.2	14.9	14.0	14.2	12.6	12.4	9.5	6	145	21.9
50,000 - 200,000	10.0	8.5	16.2	10.7	9.0	8.6	8.3	9.5	10.4	4	176	15.3
UNDER 50,000	10.0	10.4	7.1	8.8	9.3	9.3	9.7	9.6	17.3	22	575	53.9
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	3	68	7.0
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	24	1.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.3	35	988	100.0

Table E-20

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : PACIFIC STATES

POPULATION OF CITY (1)	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	8.6	10.4	9.9	9.0	8.6	8.9	8.8	14.3	8	651	18.8
50,000 - 200,000	10.0	10.2	12.2	13.7	14.1	14.6	15.2	15.8	7.2	15	531	24.1
UNDER 50,000	10.0	10.6	9.1	8.9	9.2	9.3	8.9	8.8	12.7	33	1200	44.1
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	10	238	7.6
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	126	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.5	66	2746	100.0

Table E-21

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

POPULATION OF CITY : THE NATION

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
POPULATION OF CITY (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
OVER 200,000	10.0	8.8	15.6	14.6	13.5	12.5	11.8	11.3	15.5	46	3582	13.8
50,000 - 200,000	10.0	9.5	10.5	10.3	9.9	9.7	9.5	9.4	16.1	62	3526	19.9
UNDER 50,000	10.0	10.6	8.1	8.5	9.0	9.4	9.7	9.9	13.5	309	11287	52.1
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	53	1241	5.2
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	1757	8.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.4	470	21393	100.0

Table E-22

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : NEW ENGLAND STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	11.4	10.2	8.8	11.1	12.9	13.2	14.0	4.6	10	461	52.4
10 - 20 PCT.	10.0	9.0	12.1	12.9	11.6	10.1	9.5	8.9	14.1	8	228	26.0
30 - 40 PCT.	10.0	10.4	1.4	1.8	1.2	2.2	3.8	4.0	29.8	2	36*	3.2
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	132	10.9
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	73	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6	26	930	100.0

Table E-23

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : MIDDLE ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	11.7	18.0	15.9	16.1	16.5	17.2	18.1	4.0	28	1129	36.2
10 - 20 PCT.	10.0	9.6	7.8	8.4	8.4	8.3	8.2	7.9	13.8	27	1639	40.4
20 - 30 PCT.	10.0	10.3	15.0	12.4	11.7	9.2	8.1	7.3	28.7	1	84*	.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	160	4.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	528	18.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3	62	3540	100.0

Table E-24

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : EAST NORTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.4	14.4	15.9	16.5	17.7	17.5	18.1	3.9	41	1392	33.6
10 - 20 PCT.	10.0	9.8	8.8	8.9	8.8	8.7	8.8	8.7	11.4	41	1748	42.9
20 - 30 PCT.	10.0	10.5	9.4	8.2	8.3	7.8	7.8	7.5	15.1	7	274	5.9
30 - 40 PCT.	10.0	9.4	12.7	6.8	5.0	4.4	3.8	3.7	31.0	2	43*	.9
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	8	242	5.5
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	439	11.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.8	99	4138	100.0

Table E-25

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : WEST NORTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.1	29.0	29.0	27.8	25.6	23.6	21.8	3.5	11	433	24.1
10 - 20 PCT.	10.0	9.5	8.7	9.1	9.5	9.5	10.1	10.1	9.7	16	547	31.3
20 - 30 PCT.	10.0	10.2	6.8	6.8	7.2	7.9	7.9	8.4	16.7	21	499	20.8
30 - 40 PCT.	10.0	10.3	5.7	5.8	4.7	4.3	4.5	4.8	25.9	6	113	3.3
40 - 50 PCT.	10.0	13.0	25.2	19.4	14.4	12.3	10.4	8.5	47.7	2	13*	.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	15	274	12.7
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	132	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	71	2011	100.0

Table E-26

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : SOUTH ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	8.6	16.8	20.2	22.3	20.7	21.3	24.2	6.2	3	186	7.5
10 - 20 PCT.	10.0	9.2	11.9	11.2	11.3	11.1	10.8	10.6	17.5	16	1254	36.5
20 - 30 PCT.	10.0	10.4	9.0	9.1	8.9	9.1	9.3	9.2	26.8	19	1858	44.3
30 - 40 PCT.	10.0	10.5	7.9	6.6	8.2	8.1	9.4	10.3	36.5	2	79*	1.4
40 - 50 PCT.	10.0	11.8	7.1	10.3	9.8	9.1	7.9	8.0	51.4	2	124	1.6
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	305	8.6
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	22.0	42	3806	100.0

Table E-27

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : EAST SOUTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	11.5	0.0	0.0	0.0	0.0	0.0	3.9	2.2	1	48*	2.1
10 - 20 PCT.	10.0	9.9	7.2	9.3	11.7	12.1	13.6	14.3	13.0	6	432	25.6
20 - 30 PCT.	10.0	9.6	10.4	9.8	9.4	9.4	9.2	9.3	28.2	14	787	61.2
30 - 40 PCT.	10.0	9.5	12.3	13.7	12.5	11.2	10.9	9.9	30.0	3	120	5.4
40 - 50 PCT.	10.0	10.3	16.7	15.5	15.1	13.3	12.1	10.5	49.7	2	24*	.9
50 - 60 PCT.	10.0	13.2	8.3	9.5	9.2	10.1	10.0	9.6	62.1	1	104*	3.9
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	12	.7
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	25.3	27	1527	100.0

Table E-28

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : WEST SOUTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	11.3	6.6	11.6	13.3	13.2	12.6	16.8	5.2	5	181	14.3
10 - 20 PCT.	10.0	9.6	14.1	13.3	12.7	12.1	11.6	11.4	18.2	12	687	44.9
20 - 30 PCT.	10.0	9.9	6.5	6.7	6.9	7.2	8.1	7.8	23.3	13	448	21.8
30 - 40 PCT.	10.0	11.2	5.5	6.2	7.2	8.0	7.8	7.7	33.6	5	131	6.9
40 - 50 PCT.	10.0	10.7	0.0	0.0	3.7	6.5	9.7	9.0	32.4	2	15*	.9
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	5	127	5.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	118	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	18.7	42	1707	100.0

Table E-29

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : MOUNTAIN STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.3	12.7	18.7	18.5	19.1	20.0	20.9	6.1	6	167	24.9
10 - 20 PCT.	10.0	9.6	13.5	13.1	12.0	12.5	12.5	12.8	10.5	19	582	50.0
20 - 30 PCT.	10.0	10.0	20.7	13.4	13.2	11.3	10.3	9.7	24.7	4	53*	6.0
30 - 40 PCT.	10.0	10.2	2.3	2.7	3.8	3.9	3.9	3.5	45.9	2	82*	8.9
40 - 50 PCT.	10.0	10.9	0.0	2.0	4.9	3.7	3.7	3.3	52.6	1	12*	1.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	3	68	7.0
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	24	1.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.3	35	988	100.0

Table E-30

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : PACIFIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.0	9.1	10.9	11.9	13.3	13.9	15.2	6.0	21	885	32.6
10 - 20 PCT.	10.0	9.6	8.6	9.6	9.6	9.6	9.8	9.5	12.7	24	1247	42.7
20 - 30 PCT.	10.0	10.6	13.1	10.1	9.5	8.5	7.6	7.2	21.5	10	226	10.7
30 - 40 PCT.	10.0	13.0	17.0	10.2	9.1	7.1	6.3	5.9	30.6	1	24*	1.0
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	10	238	7.6
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	126	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.5	66	2746	100.0

Table E-31

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

FAMILIES WITH INCOME UNDER $4000 : THE NATION

PERCENT OF FAMILIES IN DISTRICT BELOW $4,000 INCOME (1)	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.3	13.8	16.9	17.5	19.0	20.3	21.3	4.6	126	4882	24.8
10 - 20 PCT.	10.0	9.4	11.2	11.2	11.0	10.8	10.7	10.7	13.8	169	8364	39.0
20 - 30 PCT.	10.0	10.2	8.5	7.8	7.9	7.8	7.6	7.5	24.6	89	4229	18.9
30 - 40 PCT.	10.0	10.8	6.7	6.3	6.5	6.3	6.1	6.0	33.6	23	628	2.4
40 - 50 PCT.	10.0	11.6	7.9	7.9	7.8	7.1	6.8	6.1	47.8	9	188	.5
50 - 60 PCT.	10.0	13.5	6.0	6.4	6.4	6.0	6.4	6.2	62.1	1	104	.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	53	1241	5.2
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	1757	8.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.4	470	21393	100.0

Table E-32

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT I NEW ENGLAND STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT MINORITY STUDENTS ENROLLED (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.7	6.5	6.0	7.5	8.7	9.1	10.0	6.6	13	533	58.2
10 - 20 PCT.	10.0	9.3	26.5	27.2	21.2	15.9	13.8	15.0	7.8	1	36*	4.3
40 - 50 PCT.	10.0	8.4	13.0	14.8	12.9	11.5	10.4	8.9	19.5	1	52*	9.4
70 - 80 PCT.	10.0	8.4	13.7	15.5	14.8	11.2	9.1	7.6	23.1	1	8*	1.5
UNKNOWN PCT.	10.0	11.4	11.7	8.4	8.0	10.0	12.4	11.9	8.1	4	96*	8.2
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	132	10.9
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	73	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6	26	930	100.0

Table E-33

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : MIDDLE ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT MINORITY STUDENTS ENROLLED (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	11.5	14.8	14.3	13.8	15.2	16.0	16.4	4.9	32	1312	44.3
10 - 20 PCT.	10.0	11.0	4.7	10.1	12.0	11.0	11.5	12.8	9.2	3	83*	1.8
20 - 30 PCT.	10.0	9.1	12.3	14.2	12.7	10.9	9.6	9.5	12.5	2	108	3.4
40 - 50 PCT.	10.0	9.0	10.2	10.9	11.5	10.3	9.6	8.7	15.5	3	135	1.9
60 - 70 PCT.	10.0	8.6	6.9	6.7	7.0	6.1	5.6	5.3	20.5	3	681	13.5
80 - 90 PCT.	10.0	9.4	19.3	17.2	14.7	12.0	11.3	10.5	15.2	2	153	1.8
90 -100 PCT.	10.0	7.9	20.8	17.0	14.2	13.0	13.5	11.9	13.8	1	23*	.4
UNKNOWN PCT.	10.0	11.5	4.9	5.2	6.6	8.0	8.5	9.0	10.1	10	357	9.8
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	6	160	4.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	528	18.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3	62	3540	100.0

Table E-34

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : EAST NORTH CENTRAL STATES

PERCENT MINORITY STUDENTS ENROLLED (1)	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	9.9	8.5	9.9	10.6	11.3	11.2	11.7	6.3	50	1803	46.2
10 - 20 PCT.	10.0	10.7	5.7	5.5	6.2	7.0	7.5	7.1	11.3	7	244	5.7
20 - 30 PCT.	10.0	9.0	13.5	13.0	10.6	9.7	9.2	8.7	11.4	4	202	4.5
30 - 40 PCT.	10.0	9.0	13.1	10.6	8.9	7.2	7.7	7.9	13.0	1	58*	1.4
40 - 50 PCT.	10.0	9.3	24.0	15.6	17.6	14.5	12.1	11.0	14.3	1	39*	1.1
50 - 60 PCT.	10.0	9.2	16.2	12.4	11.0	9.4	8.9	7.8	21.4	1	39*	.8
60 - 70 PCT.	10.0	9.6	11.4	11.3	10.2	9.7	9.2	8.3	19.0	3	343	6.9
90 -100 PCT.	10.0	7.9	8.0	13.0	12.5	10.2	9.2	8.2	14.0	1	11*	.4
UNKNOWN PCT.	10.0	11.0	9.9	8.9	9.2	9.1	9.9	10.4	8.6	23	718	16.3
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	8	242	5.5
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	439	11.2
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.8	99	4138	100.0

Table E-35

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : WEST NORTH CENTRAL STATES

PERCENT MINORITY STUDENTS ENROLLED (1)	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.2	11.5	12.0	12.0	11.2	11.3	11.1	8.5	34	1172	59.7
10 - 20 PCT.	10.0	7.0	11.4	11.7	9.8	9.4	9.4	8.4	11.4	1	59*	2.3
30 - 40 PCT.	10.0	9.3	17.5	8.0	10.1	10.4	10.4	9.0	17.2	1	22*	2.8
40 - 50 PCT.	10.0	13.4	23.5	12.5	8.3	6.0	4.6	3.8	21.5	1	12*	.2
70 - 80 PCT.	10.0	13.2	29.8	18.2	12.1	10.9	9.6	7.8	51.3	1	12*	.3
UNKNOWN PCT.	10.0	9.8	3.8	5.4	5.5	7.5	7.3	8.1	16.2	18	328	14.7
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	15	274	12.7
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	132	7.5
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.5	71	2011	100.0

Table E-36

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : SOUTH ATLANTIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT MINORITY STUDENTS ENROLLED (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	9.4	3.9	5.6	6.7	7.1	7.1	7.4	15.1	6	511	13.5
10 - 20 PCT.	10.0	9.1	3.9	7.4	6.7	6.1	7.0	9.3	13.5	5	137	4.9
20 - 30 PCT.	10.0	9.4	9.1	9.0	9.8	10.6	10.8	10.8	17.1	7	711	23.1
30 - 40 PCT.	10.0	10.2	11.0	10.7	10.6	10.3	10.4	10.2	24.8	11	1190	31.0
40 - 50 PCT.	10.0	10.4	10.9	10.5	9.4	9.7	9.7	9.6	28.7	2	301	9.1
50 - 60 PCT.	10.0	10.2	10.9	9.6	10.3	10.4	10.7	10.5	30.2	6	301	5.1
60 - 70 PCT.	10.0	11.2	29.5	[illegible]	22.0	19.3	16.9	15.1	28.2	2	103	2.1
70 - 80 PCT.	10.0	12.5	8.9	13.1	11.8	11.4	10.0	9.8	54.5	1	86*	1.0
90 -100 PCT.	10.0	8.0	4.2	3.6	4.9	5.1	5.1	6.3	22.7	1	113	.8
UNKNOWN PCT.	10.0	9.2	4.8	5.2	5.1	4.8	5.1	5.7	33.4	1	48	.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	305	8.6
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	22.0	42	3806	100.0

Table E-37

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : EAST SOUTH CENTRAL STATES

PERCENT MINORITY STUDENTS ENROLLED (1)	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.4	8.1	9.5	11.1	10.9	11.6	12.2	18.5	13	716	45.0
10 - 20 PCT.	10.0	8.9	6.3	6.3	7.2	7.8	7.8	7.7	24.8	4	231	15.5
20 - 30 PCT.	10.0	9.9	6.5	6.8	4.5	4.2	5.1	5.4	34.3	2	39*	1.6
30 - 40 PCT.	10.0	9.2	12.7	10.8	9.5	8.6	8.0	8.0	30.3	2	157	16.4
40 - 50 PCT.	10.0	9.4	4.3	5.4	5.4	7.2	6.1	6.7	32.7	1	35*	4.6
50 - 60 PCT.	10.0	9.3	20.8	18.5	15.8	15.7	15.3	13.9	30.2	2	173	9.7
60 - 70 PCT.	10.0	10.8	21.3	20.0	19.4	16.2	15.0	12.5	55.6	1	12*	.5
90 -100 PCT.	10.0	13.2	8.3	9.5	9.2	10.1	10.0	9.6	62.1	1	104	3.9
UNKNOWN PCT.	10.0	10.5	0.0	0.0	0.0	0.0	0.0	.5	15.3	1	48	2.1
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	12	.7
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	25.3	27	1527	100.0

Table E-38

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : WEST SOUTH CENTRAL STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT MINORITY STUDENTS ENROLLED (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	9.6	5.7	7.9	8.1	8.7	9.8	11.5	9.2	7	331	21.7
10 - 20 PCT.	10.0	11.0	0.0	8.5	11.8	10.9	11.5	13.1	9.9	2	48*	3.5
20 - 30 PCT.	10.0	10.8	4.0	5.2	6.2	6.9	7.5	7.7	25.1	10	366	19.1
30 - 40 PCT.	10.0	9.4	14.2	13.5	13.0	12.3	11.7	11.1	20.0	2	193	15.7
40 - 50 PCT.	10.0	9.5	25.5	22.1	18.9	17.7	14.8	14.2	20.9	2	143	7.3
50 - 60 PCT.	10.0	10.1	4.6	5.9	6.0	6.3	6.5	7.2	20.3	2	143	8.4
70 - 80 PCT.	10.0	10.1	26.2	20.7	19.7	18.1	17.2	15.4	27.5	2	95*	5.4
UNKNOWN PCT.	10.0	9.4	3.6	3.7	4.4	5.3	6.9	6.4	21.0	10	143	7.8
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	5	127	5.8
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	118	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	18.7	42	1707	100.0

Table E-39

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : MOUNTAIN STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT MINORITY STUDENTS ENROLLED (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.1	14.7	16.2	15.9	16.7	17.3	18.3	7.2	11	347	37.9
10 - 20 PCT.	10.0	8.7	15.8	12.5	9.7	8.7	8.9	10.4	10.4	5	194	18.1
20 - 30 PCT.	10.0	9.9	20.5	15.5	21.5	22.4	18.3	15.2	10.2	1	22*	2.9
30 - 40 PCT.	10.0	11.3	4.4	4.1	3.0	3.1	4.1	4.3	34.9	2	32*	4.3
40 - 50 PCT.	10.0	9.4	17.9	20.0	14.4	14.7	13.0	12.6	12.3	2	57*	5.5
70 - 80 PCT.	10.0	9.1	22.0	12.7	12.7	11.6	10.1	8.9	31.1	2	31*	3.2
90 -100 PCT.	10.0	10.9	0.0	2.0	4.9	3.7	3.7	3.3	52.6	1	12*	1.3
UNKNOWN PCT.	10.0	10.2	3.3	5.7	7.4	7.7	7.8	7.1	23.8	8	201	18.1
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	3	68	7.0
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	24	1.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.3	35	988	100.0

Table E-40

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS

MINORITY STUDENT ENROLLMENT : PACIFIC STATES

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT MINORITY STUDENTS ENROLLED (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.8	9.1	10.4	12.7	14.2	14.5	14.7	6.8	16	615	31.0
10 - 20 PCT.	10.0	10.2	10.7	14.0	13.8	14.2	14.2	14.7	7.1	15	562	21.4
20 - 30 PCT.	10.0	9.1	.6	7.1	8.1	9.5	10.4	10.0	12.3	6	68*	2.6
30 - 40 PCT.	10.0	9.8	8.5	8.3	6.1	5.8	5.7	5.8	20.9	2	150	5.9
40 - 50 PCT.	10.0	12.1	16.4	12.6	10.1	8.4	7.4	6.7	28.7	3	59*	2.2
50 - 60 PCT.	10.0	9.0	10.6	8.4	7.8	7.6	7.9	7.6	17.8	2	393	9.5
60 - 70 PCT.	10.0	10.0	11.8	11.6	14.6	12.5	10.9	10.1	22.9	2	63*	1.9
70 - 80 PCT.	10.0	7.6	21.5	20.6	17.6	14.1	12.8	11.2	22.7	1	17*	.9
UNKNOWN PCT.	10.0	9.7	8.7	6.8	6.7	6.4	6.4	6.7	15.8	9	255	11.7
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	10	238	7.6
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	126	5.4
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.5	66	2746	100.0

Table E-41

PERCENT INCREASE IN FUNDING UNDER ALTERNATIVE ALLOCATION FORMULAS
MINORITY STUDENT ENROLLMENT I THE NATION

	PROPOSAL A		PROPOSAL B						SAMPLE STATISTICS			
			PERCENTILE CRITERION CUTOFFS									
PERCENT MINORITY STUDENTS ENROLLED (1)	POVERTY COUNT (2)	WEIGHTED POVERTY COUNT (3)	5TH (4)	10TH (5)	15TH (6)	20TH (7)	25TH (8)	30TH (9)	PERCENT OF LEA CHILDREN TITLE I ELIGIBLE (10)	NUMBER OF SAMPLE DISTRICTS (11)	NUMBER OF SAMPLE STUDENTS (12)	NAEP SURVEY WEIGHT (13)
0 - 10 PCT.	10.0	10.2	8.4	9.9	10.7	11.7	12.5	13.2	8.2	182	7540	36.8
10 - 20 PCT.	10.0	9.7	8.0	9.1	9.6	10.2	10.5	10.8	11.5	43	1594	7.7
20 - 30 PCT.	10.0	9.8	8.0	9.1	9.5	9.3	8.9	8.8	18.0	32	1516	8.0
30 - 40 PCT.	10.0	10.0	11.1	10.0	9.0	8.5	8.2	8.0	24.0	21	1802	9.6
40 - 50 PCT.	10.0	10.0	15.1	13.0	12.0	10.8	9.9	9.3	24.1	16	833	4.1
50 - 60 PCT.	10.0	9.7	10.8	9.8	9.4	9.1	8.9	8.5	23.5	13	1049	3.9
60 - 70 PCT.	10.0	8.9	13.0	12.3	12.2	11.2	10.3	9.7	21.1	11	1202	4.2
70 - 80 PCT.	10.0	10.7	19.5	17.2	15.2	13.5	11.8	10.5	32.1	8	249	1.0
80 - 90 PCT.	10.0	8.5	21.9	23.0	19.1	16.8	14.9	14.4	15.2	2	153	.3
90 -100 PCT.	10.0	12.2	6.2	6.4	6.9	7.0	6.8	6.6	41.1	5	263	.6
UNKNOWN PCT.	10.0	10.3	6.8	6.6	7.4	7.9	8.7	9.2	13.6	84	2194	9.7
UNKNOWN ELIGIBLE	-	-	-	-	-	-	-	-	-	53	1241	5.2
UNKNOWN DISTRICT	-	-	-	-	-	-	-	-	-	-	1757	8.9
ALL DISTRICTS	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.4	470	21393	100.0

In several instances, district categories are based on samples of less than 100 students, and these have been noted in the tables. Although the general patterns of results are probably accurate even in these categories, the absolute percentage increases should be regarded with some caution.

Appendix F

DERIVATION OF LOW-ACHIEVEMENT PROXY FORMULA USED IN PROPOSAL C

Appendix F

DERIVATION OF LOW-ACHIEVEMENT PROXY FORMULA USED IN PROPOSAL C

The statutory language and legislative history of ESEA have created a debate over the most appropriate method of distributing money under that program. The present distribution formula uses as its target group a count of children from low-income families, based on the assumption that these children are both most likely to be low-achieving and least likely to receive adequate educational resources without federal intervention.

In recent years, there has been considerable discussion of distribution formulas that use as the target group a count of low-achieving children. In 1965, there were no readily available data on which such a formula could be based, but since that time the situation has changed greatly. The most direct way to provide information on numbers of low-achieving students would be to administer a single achievement test to students in every district or state. With only modest changes, the tests of the National Assessment of Educational Progress could be used for such a purpose, although we see substantial political opposition to such a course of action.

A second type of allocation formula could be based on the use of appropriate but different achievement tests in each state. This option has been discussed in Chapter XI of the text.

A third alternative is to devise a statistical estimate, or set of estimates, of the overlap between low achievement and various family-income levels. The estimate(s) could then be used as a proxy for direct testing. When combined with data on the distribution of income within and among states, an allocation formula could be constructed that reflected the differential likelihood of some states having more low-achieving students than others. For example, if we knew that 30% of the children from families with incomes in the $0-6,000 range were low-achieving, and that a particular state has 500,000 school-age children from families in that income range, then we would estimate that among those children, about 150,000 would be low-achieving.

The principal problem in implementing this approach has been the general lack of reliable data from which to make estimates of the overlap of achievement and income. In order to be useful for the purpose we suggest, a data source should ideally include a nationally representative sample of students, accurate information on family income for each sample student, and achievement scores for all students on a single test.

The Health Examination Survey (HES) of the National Center for Health Statistics was found to contain all of this data. Cycle II of the HES was conducted between 1963 and 1965 to gather information on a sample of approximately 7,000 children ages 6 to 11 years; Cycle III was conducted between 1966 and 1970 to gather information on a sample of approximately 7,000 children ages 12 to 17 years. The data of this survey tell the age, sex, and residence of the child, direct income data from parents, the results of a thorough physical examination of each child, and the scores of each child on a series of tests, of which two were the Wide Range Achievement Test (WRAT) and the Weschler Intelligence Scale (WISC). Scores for the WRAT and WISC subtests were also entered. This allowed us to use specific scores on reading (from the WRAT) and vocabulary (from the WISC) as measures of basic skills achievement. Scores of these tests and subtests were expressed in terms of norms developed specifically for the NES sample and are therefore extremely accurate.

For the purpose of our analyses, we defined low achievement as below the 20th percentile. Since there is no precisely defined and generally accepted definition of low achievement, this mark is necessarily somewhat arbitrary. However, the choice of the 20th percentile is consistent with informal usage by educators and researchers, and has the additional advantage of being a fair representation of the average achievement level of children now participating in Title I projects.

The NCHS has not published, or to our knowledge calculated, contingency tables on income and achievement, but these numbers can be derived from the basic data tapes. Unfortunately, the Cycle III tape was not available to us at the time of our analysis. This raised the question of whether achievement/family-income relationships varied with student's age in any systematic way. By creating one-year cohorts of the 6- to 11-year-old sample, we could test this hypothesis incompletely. Our analyses produced extremely consistent estimates across all age cohorts. Although the possibility remains of some radical change occurring during the adolescent years, we can find no indication of it in the 6- to 11-year-old data. Therefore, we believe that the estimates from this tape can be confidently applied to the problem of estimating low achievement among adolescents as well as elementary-aged students.

A second possible source of error in our estimates would arise if two generally appropriate tests (the WRAT and the WISC) produced significantly different counts of low-achieving students by income group. By calculating low-achievement rates separately for each of these tests, we determined that while the WISC produced slightly higher rates of low achievement at the lowest income levels, these rates did not differ significantly from those produced by using the WRAT. Again, this consistency across tests increased our confidence in the estimates.

Our third concern was that a set of estimates derived from a national sample might mask important regional (or subregional) differences. This would not be unexpected, given the wide-ranging differences in schools across the nation and the differences in average income and cost of living. The HES data sample had been designed and standardized for four regions of the nation: Northeast, Midwest, South and West. (Although similar to the five census regions, the HES regions were drawn so as to have approximately equal populations.) When low-achievement rates by income category were calculated for the four regions separately, significant differences emerged. In subsequent applications of low-achievement rates to the allocation formula of Proposal C, these regional rates were used instead of the national rates.

Finally, because income data in the HES was drawn from 1965, it required some adjustment in order to produce accurate calculations from the 1970 Census. This was done simply by calculating a ratio of the 1970 and 1965 Consumer Price Indices and applying this ratio to the 1965 income categories. The results of this adjustment are shown in Column (2) of Table F-1. Because of the relatively short period of time between 1965 and 1970 we felt it was not necessary to account for differential changes by income category.

With these estimates of the overlap of income and low achievement, we could then proceed with a simulation of the effects of an allocation formula based on a low-achievement proxy. This entailed applying the low-achievement rates to the distribution of family income within each state. The 1970 Census published by state the number of families and the average number of children aged 6-17 in such families, by family income category in increments. Using this data, we calculated the number of school-aged children in each income category and subsequently the number of low-achieving children in each state. Knowing this, we could derive the percentage of all low-achieving children residing in a particular state. The results of this simulation are shown in Chapter XV, in Table 29.

Several improvements could be made on this method to increase its reliability. Certainly a more recent income and education survey of individual children would give us greater confidence, as would modifications of family income by size and location of household. Even more to the point, the presence of significant regional variation suggests that significant state-by-state variations may also be present. Nevertheless, we believe that the present method and data base produce an accurate impression of the direction and size of distributional patterns created by an allocation formula using a low-achievement proxy.

Table F-1

LOW-ACHIEVEMENT RATES
(BY REGION AND INCOME CATEGORIES FOR 1965 AND 1970)

		Rate of Children's Low Achievement*			
1965 Income Category	1970 Family Income	Northeast	Midwest	South	West
$ 0 - 2,900	$ 0 - 3,499	35%	38%	55%	41%
$ 3,000 - 4,900	$ 3,500 - 5,999	30	24	36	27
$ 5,000 - 6,900	$ 6,000 - 8,999	21	16	21	12
$ 7,000 - 9,900	$ 9,000 -12,499	8	11	11	8
$10,000 and above	$12,500 and above	5	7	6	4

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*Source: Reference 5, Chapter XV.

REFERENCES

Chapter I

1. D. T. Campbell, "Qualitative Knowing in Action Research," Kurt Lewin Award Address, Society for the Psychological Study of Social Issues, Meeting with American Psychological Association, New Orleans, Louisiana, September 1, 1974.

2. J. Burkhead, "Economics Against Education," Teachers College Record, p. 198 (December 1973).

3. D. T. Campbell, op. cit.

4. C. Jencks et al., Inequality: A Reassessment of the Effect of Family and Schooling in America, p. 15 (Basic Books, New York, 1972).

5. W. G. Spady, "Mastery Learning: Its Sociological Implications," paper presented at the American Educational Research Association annual meeting, New Orleans, Louisiana, 1973.

6. C. Jencks, loc. cit.

7. J. S. Wholey et al., Federal Evaluation Policy: Analyzing the Effects of Public Programs (The Urban Institute, Washington, D.C., 1973).

Chapter II

1. T. C. Thomas and S. H. Pelavin, "Patterns in ESEA Title I Reading Achievement," Stanford Research Institute, Menlo Park, California p. 98 (March 1976).

2. Ibid.

3. "Writing Mechanics, 1969-1974," No. 05-W-01, National Assessment of Educational Progress, U.S. Government Printing Office, Washington, D.C., p. 1 (October 1975).

4. A. Harnischfeger and D. E. Wiley, "The Marrow of Achievement Test Score Declines," Educational Technology (June 1976).

5. "Marland Says Schools Not Responsible for Score Decline," Education Daily (August 5, 1976).

6. D. B. Gertler and L. A. Barker, "Patterns of Course Offerings and Enrollments in Public Secondary Schools 1970-71," U.S. Department of Health, Education, and Welfare Publication No. (OE) 74-11400, U.S. Government Printing Office, Washington, D.C. (1972).

   L. Ostendorf, "Summary of Offerings and Enrollments in Public Secondary Schools 1972-73," U.S. Department of Health, Education, and Welfare Publication No. (NCES) 76-150, U.S. Government Printing Office, Washington, D.C. (1975).

7. A. Harnischfeger and D. E. Wiley, op. cit., p. 10.

8. "Functional Literacy: A Brief Summary of an Assessment of In-School 17 Year-Olds in 1975," Education Commission of the States, Denver, Colorado (1975).

9. The National Association of Secondary School Principals, "Competency Tests and Graduation Requirements," The Association, Reston, Virginia (1976).

10. "They Shall Not Pass," *Time*, pp. 65-66 (December 31, 1973).

11. National Association of Secondary School Principals, op. cit.

Chapter III

(See general bibliography.)

Chapter IV

1. *1965 U.S. Code Congressional and Administrative News*, p. 1449.

2. R. E. McKay, "The President's Program: 'A New Commitment to Quality and Equality in Education,'" *Phi Delta Kappan*, Vol. 46, No 9, pp. 427-429 (May 1965).

3. U. Bronfenbrenner, statement before the Subcommittee on the War on Poverty Programs of the Committee on Education and Labor, House of Representatives, 89th Congress, Hearing on H.R. 10440, Part 3, pp. 1336 et seq.

4. Ibid.

5. L. B. Johnson, "Message to Congress on Education," in *1965 Congressional Quarterly Almanac*, p. 1374.

6. S. Shriver, statement before the Subcommittee on Employment, Manpower, and Poverty of the Committee on Labor and Public Welfare, United States Senate, 89th Congress, Second Session, Hearing on Amendments to the Economic Opportunity Act of 1964, pp. 69 et seq. (1965).

7. F. Keppel, statement before the General Education Subcommittee of the Committee on Education and Labor, House of Representatives, 89th Congress, First Session, Hearings on Aid to Elementary and Secondary Schools, H.R. 2361 and H.R. 2362, pp. 116 et seq. (1965).

8. B. S. Bloom, statement before the General Education Subcommittee of the Committee on Education and Labor, House of Representatives, 89th Congress, First Session, Hearings on Aid to Elementary and Secondary Schools, H.R. 2361 and H.R. 2362, pp. 339 et seq. (1965).

9. A. Celebrezze, statement before the General Education Subcommittee of the Committee on Education and Labor, House of Representatives, 89th Congress, First Session, Hearings on Aid to Elementary and Secondary Schools, H.R. 2361 and H.R. 2362, pp. 158-159 (1965).

10. S. K. Bailey and E. K. Mosher, The Office of Education Administers A Law, pp. 109-119 (Syracuse University Press, Syracuse, New York, 1968).

11. Bloom, op. cit., p. 353.

12. S. Halperin, "ESEA: Five Years Later," in Congressional Record, pp. 30916-30917 (September 9, 1970).

13. Annual Evaluation Reports on Programs Administered by the U.S. Office of Education, FY 1971, FY 1972, FY 1973, FY 1974, and FY 1975, U.S. Office of Education, Office of Planning, Budgeting, and Evaluation, Washington, D.C.

14. "Antipoverty Funds Reduced and Earmarked," 1966 Congressional Quarterly Almanac, p. 250.

15. L. B. Johnson, "Message on Children and Youth," in 1967 Congressional Quarterly Almanac, pp. 55-A.

16. Hearings on the Head Start Child Development Act of 1969 of the Subcommittee on Employment, Manpower, and Poverty of the Committee on Labor and Public Welfare, Senate, reported in 1969 Congressional Quarterly Almanac, pp. 496-497.

17. G. E. Mason, and R. A. Palmatier, "Preparation of Professionals In Reading," Journal of Reading, pp. 637-639 (May 1973), and M. Austin, "Professional Training of Reading Personnel," in Innovation and Change in Reading Instruction, H. M. Robinson, ed., pp. 357-396 (The Sixty-Seventh Yearbook of the National Society for the Study of Education, Chicago, Part II, 1968).

18. C. Bereiter, "An Academic Preschool for Disadvantaged Children: Conclusions from Evaluation Studies," in *Preschool Programs for the Disadvantaged*, Julian Stanley, ed. (The Johns Hopkins University Press, Baltimore, Maryland, 1972).

S. White et al., "Federal Programs for Young Children: Review and Recommendations," Vols. I-III, U.S. Department of Health, Education, and Welfare, Washington, D.C. (1973).

T. C. Thomas et al., "Patterns in ESEA Title I Reading Achievement," Contract 300-76-0025, draft final report, Stanford Research Institute, Menlo Park, California (December 1975).

19. M. Kirst, *Politics of Education At the Local, State and Federal Level* (McCutchan Publishing Company, Berkeley, California, 1970).

20. "Legislative History of P.L. 89-10," *1965 U.S. Code Congressional and Administrative News*, p. 1446.

21. "Title I of ESEA: Is It Helping Poor Children?," Washington Research Project, Southern Center for Studies in Public Policy and the NAACP Legal Defense and Educational Fund, Inc., Washington, D.C. (1966).

22. "Legislative History-Education Amendments of 1970, P.L. 91-230," *1970 U.S. Code Congressional and Administrative News*, p. 2777.

23. Ibid., p. 2788.

24. Ibid., p. 2777-2778.

25. Ibid., p. 2787-2788.

26. Public Law 93-380 (August 21, 1974).

27. *United States Code*, Vol. 20, Section 241e (a).

28. Ibid., Subsection (1) (A).

29. *Code of Federal Regulations*, Vol. 45, Section 116.17(f) (1974).

30. "Program Guide No. 44," Sec. 2.1, Redesignated Program Directive Inst. L-2031, U.S. Department of Health, Education, and Welfare, Washington, D.C. (1968).

31. R. Silverstein et al., "Description of Title I ESEA Legal Framework and Preliminary Analysis of LEA Title I Program Requirements," Contract 400-75-0081, Lawyers' Committee for Civil Rights Under Law, Washington, D.C., p. 121 (unpublished draft).

32. M. P. Pfiel, "State Compensatory Education and Bilingual Programs," Contract No. OEC-0-72-5016, Educational Policy Research Center Research Memorandum 2158-25, Stanford Research Institute, Menlo Park, California, p. 3 (February 1975).

33. M. W. McLaughlin, Evaluation and Reform: The Elementary and Secondary Education Act of 1965, Title I, p. vii (Ballinger Publishing Co., Cambridge, Massachusetts, 1975).

34. Silverstein, op. cit., p. 13.

35. "Regulations for Consolidated Categorical Aid Programs in California Schools," California State Department of Education (1975), p. 2 [Reprinting California Administrative Code, Title 5, §3934(d)].

36. "State Annual Evaluation Report for 1972-73 Title I Elementary and Secondary Education Act of 1965 Public Law 89-10, As Amended," State of Montana, Office of the Superintendent of Public Instruction, Helena, Montana (July 1974), p. 1.

37. "Arkansas Evaluation Report, Title I,ESEA Fiscal Year 1974," Arkansas Department of Education, Little Rock, Arkansas, p. 46, 1974.

38. Code of Federal Regulations, loc. cit.

Chapter V

1. J. Kagan and R. E. Klein, "Cross-Cultural Perspectives on Early Development," paper prepared for Burg Wartenstein Symposium No. 57, June 18-26, 1973 (Wenner-Green Foundation for Anthropological Research, New York, 1973).

2. U. Bronfenbrenner, "A Report of Longitudinal Evaluation of Pre-School Programs," U.S. Department of Health, Education, and Welfare, Office of Human Development, Washington, D.C. (1974).

   J. S. Bissell, "The Cognitive Effects of Pre-School Programs for Disadvantaged Children," doctoral dissertation, School of Education, Harvard University, Cambridge, Massachusetts (1970).

3. M. S. Stearns, "Report of Preschool Programs: The Effects of Preschool Programs on Disadvantaged Children and Their Families," U.S. Department of Health, Education, and Welfare, Office of Child Development, U.S. Government Printing Office, Washington, D.C. (1971).

4. S. H. White et al., Federal Programs for Young Children: Review and Recommendations, Volumes I-III (The Herron Institute, Cambridge, Massachusetts, 1972).

5. Carl Bereiter (personal communication) 1974.

6. P. G. Richards, An Introduction to Piaget (Harper Paperbacks, New York, 1970). J. Piaget "Intellectual Evolution from Adolescence to Adulthood," Human Development, Vol. 15, pp. 1-12 (1972).

   B. Inhelder and J. Piaget, The Growth of Logical Thinking from Childhood to Adolescence (John Day, New York, 1958).

7. N. Bayley, "Development of Mental Abilities," in Carmichael's Manual of Psychology, P. H. Mussen, ed., Volume I (John Wiley and Sons, New York, 1970).

8. R. M. Gagne, "The Acquisition of Knowledge," Psychological Review, Vol. 69, pp. 355-365 (1962).

9. J. Pascual-Leone and J. Smith, "The Encoding and Decoding of Symbols by Children: A New Experimental Paradigm and a Neo-Piagetian Model," Journal of Experimental Child Psychology, Vol. 8, No. 2, pp. 328-355 (1969).

10. J. L. Horn and R. B. Cattell, "Age Differences in Fluid and Crystallized Intelligence," Acta Psychologica, Vol. 26, pp. 107-129 (1967).

11. D. Elkind, "Conceptual Orientation Shifts in Children and Adolescents," in Adolescents and The American High School, R. F. Purnell, ed. (Holt, Rinehart and Winston, New York, 1970).

12. J. S. Bruner, "The Course of Cognitive Growth," American Psychologist, Vol. 19, No. 1, pp. 1-15 (1964).

13. Elkind, loc. cit.

14. R. Kohen-Raz, The Child from 9-13: The Psychology of Preadolescence and Puberty (Aldine/Atherton, Chicago, 1971).

H. Werner and B. Kaplan, Symbol Formation (John Wiley and Sons, New York, 1963).

15. R. N. Wolman and E. N. Baker, "A Developmental Study of Word Definitions," Journal of Genetic Psychology, Vol. 107, pp. 159-166 (1965).

16. L. Kohlberg and C. Gilligan, "The Adolescent As a Philosopher: The Discovery of Self in a Postconventional World," Daedalus, Vol. 100, No. 4, pp. 1051-1086 (Fall 1971).

L. Kohlberg and M. Blatt, "The Effects of Classroom on Level of Moral Judgment," in Recent Research in Moral Development, L. Kohlberg and E. Buriel, eds. (Holt, Rinehart and Winston, New York, 1972).

17. P. E. Langford and S. George, "Intellectual and Moral Development in Adolescence," British Journal of Educational Psychology, Vol. 45, pp. 330-332 (1975).

18. Kohen-Raz, loc. cit.

19. __________, "Cognitive Growth Cycles in Mental Development," in Nebraska Symposium on Motivation, J. K. Cole, ed. (University of Nebraska Press, Lincoln, 1971).

Also, Elkind, loc. cit.

20. D. P. Keating and R. A. Schaefer, "Ability and Sex Differences in the Acquisition of Formal Operations," Developmental Psychology, Vol. 11, No. 4, pp. 531-532 (1975).

D. P. Keating and A. Caramazza, "Effects of Age and Ability on Syllogistic Reasoning in Early Adolescence," Developmental Psychology, Vol. 11, No. 6, pp. 837-842 (1975).

21. D. A. Wagner, "The Development of Short-Term and Incidental Memory: A Cross-cultural Study," Child Development, Vol. 45, pp. 389-396 (1974).

R. D. Linke, "Influence of Cultural Background on Hierarchical Learning," Journal of Educational Psychology, Vol. 66, No. 6, pp. 911-918 (1974).

22. A. R. Jensen, "How Much Can We Boost IQ and Scholastic Achievement?," Harvard Educational Review 1969, Vol. 39, pp. 1-123.

23. W. D. Rohwer, Jr., "Learning, Race and Society," Review of Educational Research, Vol. 41, No. 3, pp. 191-209.

24. E. Dulit, "Adolescent Thinking à la Piaget: The Formal Stage," Journal of Youth and Adolescence, Vol. 1, No. 4, pp. 281-301 (December 1972).

E. L. Chiapetta, "A Perspective on Formal Thought Development," presented to the National Association for Research in Science Teaching, 48th Annual Meeting, Los Angeles, California (1975).

25. D. L. Elkind, "Children's Discovery of the Conservation of Mass, Weight, and Volume: Piaget Replication Study II," Journal of Genetic Psychology, Vol. 98, pp. 217-219 (1961).

26. B. R. Joyce, New Strategies for Social Education (Science Research Associates, Chicago, 1972).

27. H. G. Furth and N. A. Milgram, "Labeling and Grouping Effects in the Recall of Pictures by Children," Child Development, Vol. 44, pp. 511-518 (1973).

B. J. Wilson and R. A. English, "Reading Order and Recall: A Developmental Look," Psychological Reports, Vol. 36, pp. 127-130 (1975).

J. E. Tapin, "Developmental Changes in Conditional Reasoning: Linguistic or Logical," Journal of Experimental Child Psychology, Vol. 17, pp. 360-373 (1974).

D. Elkind, "Cognitive Growth Cycles in Mental Development," Nebraska Symposium on Motivation, J. K. Cole, ed. (University of Nebraska Press, Lincoln, 1971).

28. J. Horvitz and J. Levin, "Semantic and Imaginal Factors in Learning as Related to Age," Journal of Experimental Child Psychology, No. 14, pp. 11-20 (1972).

L. E. Cole and N. J. Kanak, "Paired Associate Learning and Bidirectional Associative Recall in First, Third, Fifth, and Seventh Graders," Journal of Experimental Child Psychology, Vol. 13, pp. 128-137 (1972).

29. W. D. Rohwer and J. R. Levin, "Elaboration Preferences and Differences in Learning Proficiency," in Cognitive Studies: Deficits in Cognition, Vol. II, pp. 127-148 (Brunner/Mazel, Inc., New York, 1971).

D. R. Miklich and J. S. Gillis, "Interaction of Age and Cue Validities in Multiple-Cue Probability Learning by Children," Psychological Reports, Vol. 37, pp. 235-240 (1975).

Wilson and English, loc. cit.

30. V. Pishkin and E. A. Rasmussen, "Attention and Memory Cues in Concept Learning As A Function of Task Complexity and Age," Memory and Cognition, Vol. 2, No. 2, pp. 349-352 (1975).

31. C. R. O'Donnell and K. Stanley, "Paying Students for Academic Performance: A Demonstration Project," Journal of Community Psychology, Vol. 1, No. 2, pp. 215-216 (April 1973).

K. L. Witte and J. Huntermark, "The Effect of Instructions, Evaluative Feedback, and Knowledge of Results Upon Short-term Retention of Ninth Graders," Bulletin of the Psychonomic Society, Vol. 5, No. 1, pp. 79-81 (January 1975).

A. J. Cuvo, "Incentive Level Influence on Overt Rehearsal and Free Recall as a Function of Age," Journal of Experimental Child Psychology, Vol. 18, pp. 167-181 (1974).

32. A. J. Cuvo, "Developmental Differences in Rehearsal and Free Recall," Journal of Experimental Child Psychology, Vol. 19, pp. 265-278 (1975).

33. B. B. Barratt, "Training and Transfer in Combinatorial Problem Solving," Developmental Psychology, Vol. 11, No. 6, pp. 700-704 (1975).

34. L. Guttman and I. N. Schlesinger, "Development of Diagnostic Analytical and Mechanical Ability Tests Through Facet Design and Analysis," Research Report on U.S. Office of Education Project No. OE-5-21-006, Israel Institute for Applied Research, Jerusalem (1967).

35. W. D. Rohwer, Jr., "Prime Time for Education: Early Childhood or Adolescence?," Harvard Educational Review, Vol. 41, No. 3, pp. 316-341 (1971).

36. Ibid.

37. C. Frankenstein, They Think Again ... Summary of an Educational Experiment With Disadvantaged Adolescents (Hebrew University, Jerusalem, 1972).

Chapter VI

1. M. A. Larson and F. E. Dittman, "Compensatory Education and Early Adolescence: Reviewing Our National Strategy," Stanford Research Institute, Menlo Park, California (1975).

2. S. H. Pelavin and M. A. Larson, "Compensatory Education: Who Else Should It Serve?," paper prepared for the American Educational Research Association annual meeting, New York, 1977.

3. S. H. Pelavin and J. L. David, "Evaluating Long-Term Achievement: An Analysis of Longitudinal Data from Compensatory Education Programs," Stanford Research Institute, Menlo Park, California (1977).

4. J. L. David and S. H. Pelavin, "Research on the Effectiveness of Compensatory Education Programs: A Reanalysis of Data," Stanford Research Institute, Menlo Park, California, in press.

Chapter VII

1. M. A. Larson, H. R. Winslow, and M. Malgoire, "Remedial and Compensatory Education for Adolescents in Seven States," Stanford Research Institute, Menlo Park, California, in preparation.

2. C. T. Fitz-Gibbon and H.F. Silberman, "Draft Summary of the Role Change Intervention: An Alternative Design to Contrast with Current Practice in Compensatory Education," Center for the Study of Evaluation, UCLA Graduate School of Education, p. 1 (March 1976).

3. S. Bloom, "Peer and Cross-Age Tutoring in the Schools: An Individualized Supplement to Group Instruction," U.S. Department of Health, Education, and Welfare, Washington, D.C., pp. 19-21.

4. F. Strodtbeck and L. Granick, "An Evaluation of the Youth Tutoring Youth Model for In-School Neighborhood Youth Corps," The National Commission on Resources for Youth, Inc. (December 1972).

5. S. Bloom, op. cit., pp. 58-59.

Chapter X

1. "Findings and Recommendations of the Review of Title I ESEA: A Report to the California State Department of Education FY 1974," p. 2. Also see "Findings and Recommendations of the Review of Title I ESEA: A report to the Connecticut State Department of Education FY 1975," pp. 1-2.

2. "Audit of the Elementary and Secondary Education Act Title I Program Administered by the State of California at the Hayward Unified School District," Audit Control No. 50000-09 (January 24, 1975) p. 22.

3. "Audit of the Elementary and Secondary Education Act Title I Program Administered by the State of Massachusetts," Audit Control No. 90001-01 (January 23, 1969) p. 13.

4. Section 116.36, 41 Federal Register 42894 (September 28, 1976) at 42906.

Chapter XV

1. D. Bresnick, "Why New York's Annual Title I Allocation Decreased by $50 Million, When the National Appropriation Increased by $200 Million, New York State Legislative Institute," Baruch College, p. 5, Fall 1976.

2. H. P. Miller, "Impact of Alternative Definitions of Poverty on the Allocation of Title I Funds: Analysis Based on Survey of Income and Education Conducted in April-June 1976," unpublished memorandum.

3. J. A. Emrick, J. W. Guthrie, A. S. Frentz, and R. M. Mize, The Use of Performance Criteria to Allocate Compensatory Education Funds, Stanford Research Institute, Menlo Park, California (July 1974).

4. "Plan, Operation and Response Results of a Program of Children's Examinations," Vital Health Statistics, Series 1, Number 5, Health Services and Mental Health Administration, Department of Health, Education and Welfare (October 1967).

5. "Cycle II, Health Examination Survey (Children 6-11 Years Old)," National Center for Health Statistics (1963-65).

6. Statistical Abstracts of the United States: 1974, U.S. Government Printing Office, Washington, D.C., Table 11 (1975).

7. National Center for Health Statistics, op. cit.

   and

   "Poverty Status in 1969 of Families By Family Income, Number of Related Children Under 18 Years, and Sex and Race of Head: 1970," Table 214 in Census of Population: 1970 Detailed Characteristics, U.S. Government Printing Office, Washington, D.C.

8. "Department of Health, Education, and Welfare, Office of Education, Elementary and Secondary, Act of 1965, P.L. 89-10, As Amended, Title I, Assistance for Educationally Deprived Children, Allotments for Fiscal Year 1977," U.S. Government Printing Office, Washington, D.C.

Appendix A

1. "Regulations for Consolidated Categorical Aid Programs in California Schools," California Administrative Code, Title 5, Education, Sections 3934(d), and 3938 (18 May 1974).

2. "GUIDELINES: Compensatory Education Programs in Connecticut," Connecticut State Department of Education (July 1975), pp. 3-4.

3. "Georgia State Regulations and Procedures Manual for Title I of the Elementary and Secondary Education Act," Georgia State Department of Education (1975), pp. 23-25.

4. [Untitled, undated draft of state guidelines received from Kansas State Department of Education, p. 13, "Selection of Participants."]

5. "State Policies Plan and Guidelines for Title I, ESEA, in Maine," Maine Department of Educational and Cultural Services (November 1975), p. 55.

6. "SYLLABUS: Title I Elementary and Secondary Education Act of 1965," Massachusetts Department of Education (4th ed. 1973), p. 8 and p. 48.

7. "TITLE I E.S.E.A. - Approval Policies Adopted by the State Board of Education (October 7, 1975)," Michigan Department of Education, p. 1.

8. [Untitled state Title I guidelines], Minnesota State Department of Education (1974), pp. 15, 27-28, and 51.

9. "TITLE I, ESEA: Manual of Operational Policies and Guidelines," State Department of Elementary and Secondary Education, Missouri (1975 Revision), p. 31.

10. "Instructions for Development and Approval of ESEA Title I Program Application," New Jersey Department of Education (1976), p. 19.

11. "ESEA Title I Guidelines," New York State Department of Education (1973), Criteria and Priorities, p. 17.

12. "Title I Policies and Procedures Manual," South Dakota Department of Public Instruction (undated), pp. 2-4.

13. "Directive (File Number - 100A): Vermont State Plan for Program Organization and Administration with General Goals and Objectives for Fiscal Year 1974 (July 1973)," pp. i, 1, and 8.

14. "ESEA Title I Handbook for Local Education Agencies," West Virginia Board of Education, Bureau of Services and Federal Programs (March 1975), p. 23.

15. "Instructions for Completing 1976 Title I, ESEA Application Forms," Nebraska State Department of Education (1975), Attachment A, p. 1.

16. "Guidelines for Title I, ESEA: Educationally Deprived Children," Oregon Department of Education (1974, reprinted 1975), p. 31.

17. "Pennsylvania Guidelines and Instructions for Elementary and Secondary Education Act Title I Programs (Part A - Local Educational Agencies) (July 1, 1975)," p. 8.

18. "Arkansas Evaluation Report, Title I, ESEA: Fiscal Year 1974," Arkansas Department of Education, p. 46.

19. "Annual Evaluation Report: Title I, ESEA, Fiscal Year 1972, State of Indiana Department of Public Instruction," p. 8.

20. "State Annual Evaluation Report for Fiscal Year 1974: Public Law 80-10, Title I ESEA, Bulletin No. 1447," Louisiana State Department of Education, p. 3.

21. "Annual Evaluation Report on Programs Funded Under ESEA Title I in Maryland for Fiscal Year 1974," Maryland State Department of Education (April 1975), p. 6.

22. "Annual Evaluation Report State of Missouri: Title I, ESEA," Department of Elementary and Secondary Education (1974), p. 7.

23. "Summary Report: ESEA Title I, FY 1974," State of New Hampshire Department of Education, p. 6.

24. "North Carolina Title I Evaluation Report Fiscal Year 1974: Elementary and Secondary Education Act of 1965," State Department of Public Instruction (January 1975), p. 7.

25. "Title I in Ohio: Ninth Annual Evaluation Title I, Elementary and Secondary Education Act, Fiscal Year 1974," State of Ohio Department of Education, p. 7.

26. "South Carolina Annual Evaluation Report: Title I, ESEA, 1973-74," South Carolina Department of Education, p. 2.

27. "State Annual Evaluation Report for E.S.E.A. Title I Fiscal Year 1973," Tennessee Department of Education, p. 15.

28. "Annual Report of Programs for the Disadvantaged in Texas: ESEA, Title I, 1973-74," Texas Education Agency (November, 1974), p. 7.

29. "Annual Evaluation Report, Title I Elementary and Secondary Education Act of 1965: Fiscal Year 1973," Virginia State Department of Education, p. 1.

30. "Wisconsin Annual Evaluation: Title I - E.S.E.A., Fiscal Year 1973," Wisconsin Department of Public Instruction, p. 66.

31. "1974 Evaluation Report of Alabama Title I Programs," State Department of Education, p. i.

32. "State Annual Evaluation Report for 1973-74 Title I Elementary and Secondary Education Act of 1965, Public Law 89-10, as amended," Montana Office of the Superintendent of Public Instruction (July 1975), p. 1.

33. "Title I ESEA Evaluation Report: Fiscal Year 1974," North Dakota Department of Public Instruction, p. 33.

GENERAL BIBLIOGRAPHY

"Annual Evaluation Report on Programs Administered by the U.S. Office of Education, FY1974," U.S. Department of Health, Education, and Welfare. Office of Planning, Budgeting, and Evaluation, Washington, D.C.

Digest of Educational Statistics, U.S. Department of Health, Education, and Welfare, National Center for Educational Statistics (U.S. Government Printing Office, Washington, D.C., 1975).

"Consolidated Program Information Report, 1972," U.S. Department of Health, Education, and Welfare, National Center for Education Statistics (May 1975).

ESEA Title I annual state evaluation reports, FY1970-74.

"Guide to OE-Administered Programs," in *American Education*, U.S. Department of Health, Education, and Welfare (July 1976).

Heyenman, S. P., "Toward Interagency Coordination--FY1975 Federal Research and Development Activities Pertaining to Adolescence, Third Annual Report," Social Research Group, The George Washington University, Washington, D.C. (December 1973).

Interagency Panel Information System, FY1973, FY1974, FY1975 data collection, The George Washington University, Washington, D.C.

Larson, M., "Compensatory Education and Early Adolescence: Reviewing Our National Strategy," Educational Policy Research Center Report No. 7, Stanford Research Institute, Menlo Park, California (May 1975).

"National Assessments of Science, 1969-1974," National Assessment of Educational Progress, Science Report No. 04-S-00, U.S. Department of Health, Education, and Welfare (February 1975).

Passow, A. H., "Reforming America's High Schools," *Phi Delta Kappan*, pp. 4-7 (September 1975).

Searcy, E., A. Harrell, and E. Grotberg, "Toward Interagency Coordination--An Overview of Federal Research and Development Activities Relating to Adolescence, First Annual Report," Social Research Group, The George Washington University, Washington, D.C. (December 1973).

Silver, E. S., ed., "Declining Test Scores: A Conference Report," U.S. Department of Health, Education, and Welfare, National Institute of Education, Washington, D.C. (February 1976).

Special tabulation from the 1970 fourth-count census, Bureau of the Census, Washington, D.C.

Special tabulations from the 1974 ESEA Title I Allotment Data, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, Washington, D.C.

The Condition of Education, 1976 edition, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, (U.S. Government Printing Office, Washington, D.C., 1976).